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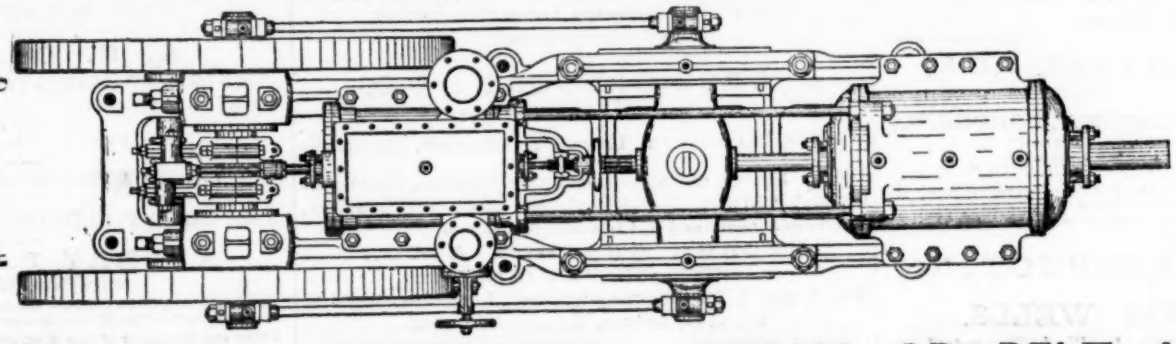

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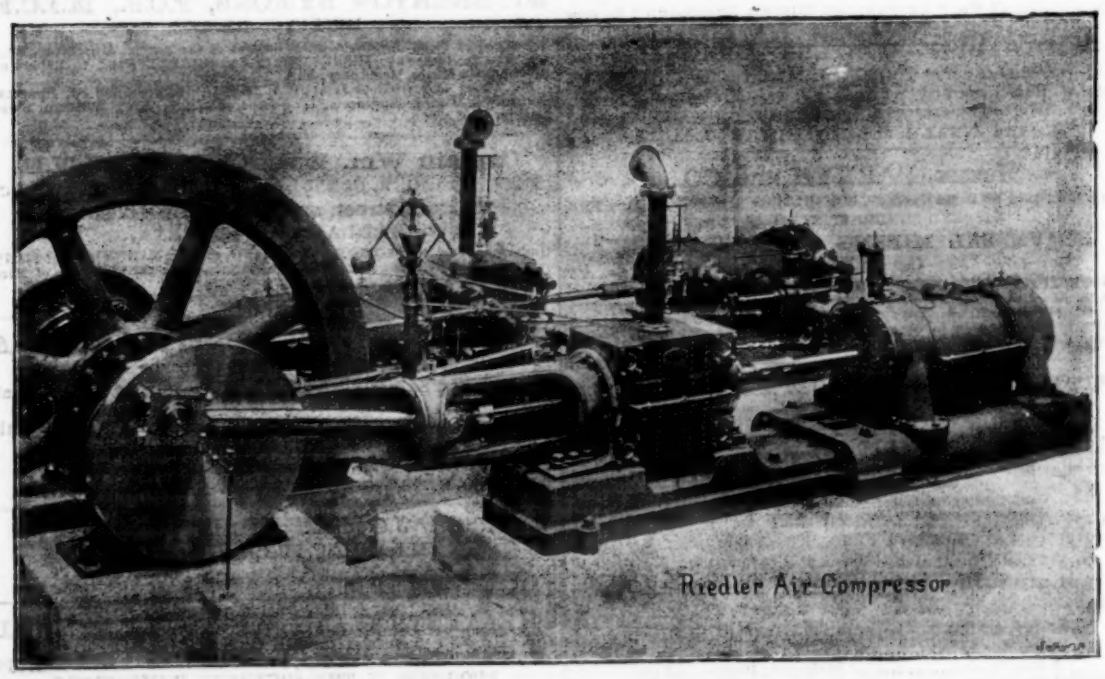

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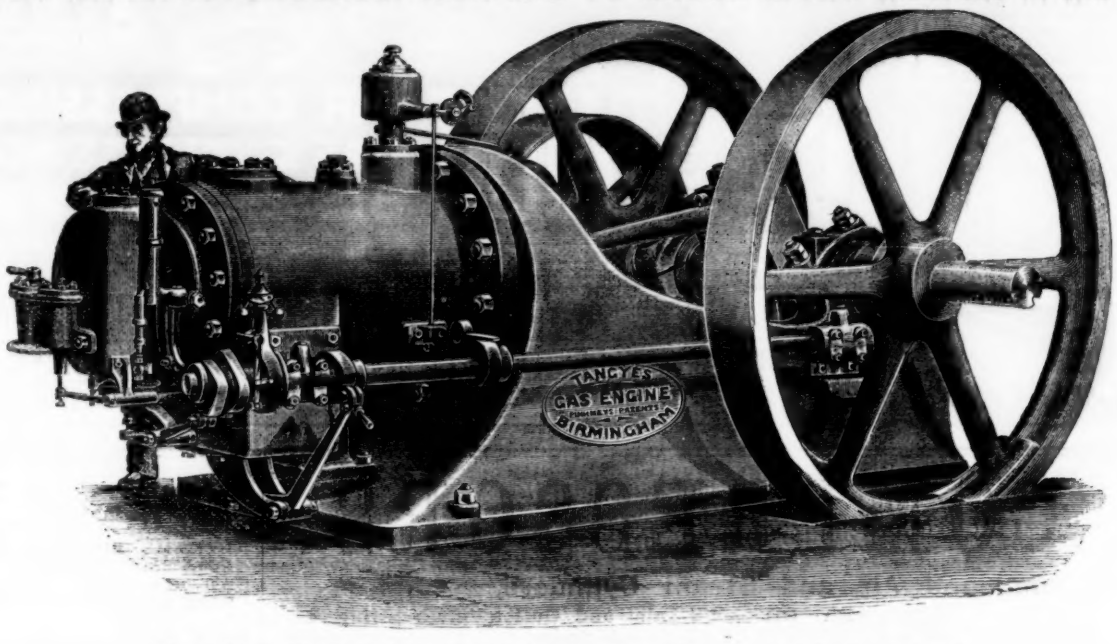

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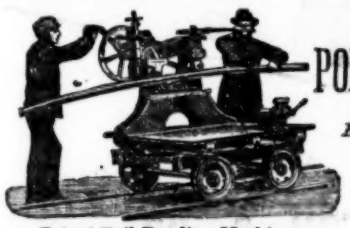

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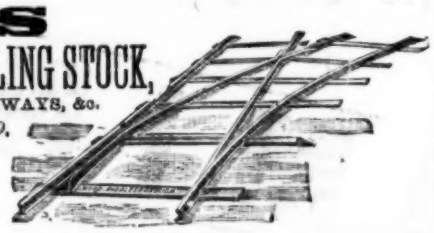
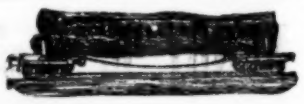
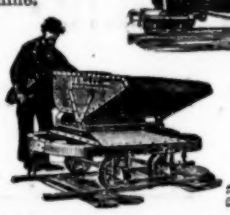
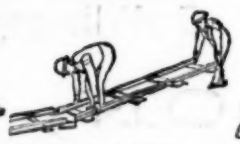
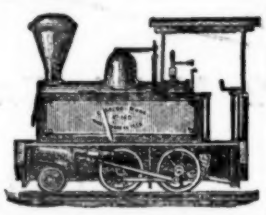










CHARLES WOOD, TEES IRON WORKS, MIDDLESBRO', ENGLAND.

TRADE MARK.

Telegraphic Address: "PACKLESS, MANCHESTER." TELEPHONE No. 1496.

Cable Mills, Glasshouse Street, Oldham Road, MANCHESTER.

IMPORTANT NOTICE.

WE have for a number of years been receiving numerous complaints from our Representatives and Agents that buyers have been deceived into purchasing Packings which are called "Frictionless," under the impression that they were buying our manufacture, or Packing of the same quality as the "Electric-Frictionless." To protect ourselves, and in the interest of our customers, we have registered the word "KARMAL," and by this name only will Electric-Frictionless be known in future. The Packing will not be altered in the slightest degree, either in its manufacture or material.

THE FRICTIONLESS ENGINE PACKING CO. LIMITED.

LIVERPOOL JOURNAL OF COMMERCE

Is the best FINANCIAL and COMMERCIAL PAPER in the Provinces.

Is now Enlarged to Eight Pages.

Contains more Commercial and Shipping News than any other Morning Paper.

Proprietor, CHARLES BIRCHALL, 32, Castle Street, Liverpool
LONDON OFFICE.—38, GRACECHURCH STREET.

WALKERS'
PATENT
"INDESTRUCTIBLE"
VENTILATING FANS
FOR MINES, TUNNELS, &c.
CONSTRUCTORS OF THE VENTILATING MACHINERY AT THE SEVERN AND MERSEY TUNNELS.

PATENT ANTI-VIBRATION SHUTTER
Applicable to all enclosed Fans

WALKER BROTHERS

Engineers,
Pagefield Ironworks,
WIGAN.

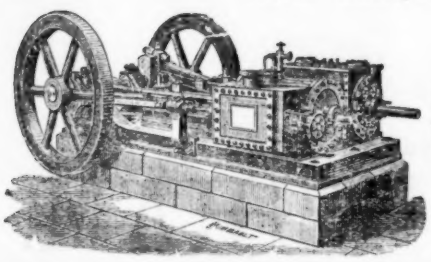
PATENT AIR COMPRESSING ENGINES
GAS COMPRESSING ENGINES
BESSEMER BLOWING ENGINES

upwards of 400 of the above now AT WORK indicating in the aggregate 150,000 Horse-Power

Fisher & Walkers' Patent Friction Clutch & Underground Haulage Machinery
THIS GEARING IS NOW EXTENSIVELY IN USE FOR HAULAGE PURPOSES.
The objects attained are SIMPLICITY, ENDURANCE OF THE MACHINERY AND ROPES with a MINIMUM EXPENDITURE OF POWER.

AIR COMPRESSORS

With Compound Air and Steam Cylinders,
Fitted with SCHRAM'S Inlet and Outlet Valves giving the greatest efficiency.



SCHRAM'S IMPROVED
Rock Boring Machines.
Supplied to the Indian, Colonial, and other Governments.
2500 IN USE in all PARTS of the WORLD.
DIAMOND PROSPECTING DRILLS.
"OPTIMUS" COMPOUND ROCK DRILL.
(P. J. OGLE'S PATENT.)
Consumes 40 per cent. less Compressed Air than any other Drill at the same time giving the most effectual results.
ESTIMATES AND FULL PARTICULARS ON APPLICATION.
RICHARD SCHRAM & CO., 17a, Great George Street, Westminster, S.W.
TELEGRAMS: "SCHRAM, LONDON," A1, A.B.C. and The Engineering Telegraph Codes Used.

Telegrams—Green, Foundry, Aberystwyth.

SILVER MEDALS AWARDED AT THE ROYAL CORNWALL POLYTECHNIC, 1872 & 1876; GOLD MEDAL AWARDED AT THE GREAT INTERNATIONAL MINING EXHIBITION, CRYSTAL PALACE, 1890.

ONLY AWARDS GIVEN FOR CONCENTRATION PLANTS

GEORGE GREEN'S PATENT
Self-Acting or Automatic Ore Dressing Machinery,
A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES—up to Five Tons may be treated, and the commercial value determined, in this way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.

GOLD STAMP AND OTHER MILLS.

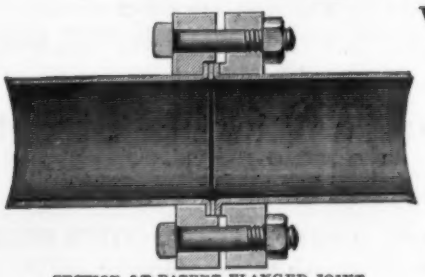
GEORGE GREEN,
THE FOUNDRY, ABERYSTWYTH.

For PURE ALUMINIUM
98 to 99½ per cent. (98 per cent. minimum guaranteed) in
INGOTS, STICKS, & ROLLING SLABS;
ALSO FOR
SHEETS, &c., AND
FERRO-ALUMINIUM.

ALUMINIUM.

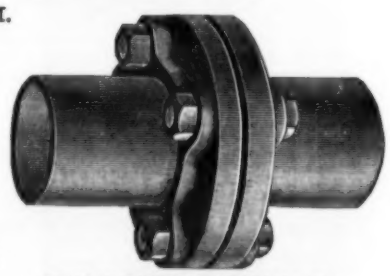
APPLY TO
HENRY R. MERTON & CO.,
2, Metal Exchange Buildings, Leadenhall Avenue,
LONDON, E.C.

A. & J. STEWART and CLYDESDALE, Limited.
Glasgow, Coatbridge, and Mossend.



SECTION OF PATENT FLANGED JOINT

WROUGHT IRON WELDED TUBES and FITTINGS for GAS, WATER, and STEAM.
Light Lap-welded Wrought-iron and Steel Tubes
(SPECIALLY ADAPTED FOR MINES).
With Patent Flanged Joints (as illustrated) for the Conveyance of Water, Steam, and Air, at High and Low Pressures.
LAP-WELDED IRON AND STEEL BOILER TUBES
FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.
STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



PLAN OF PATENT FLANGED JOINT.

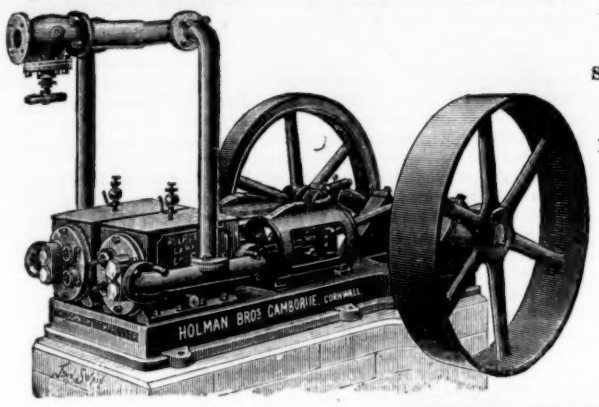
Head Offices: 41, OSWALD STREET, GLASGOW.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839.

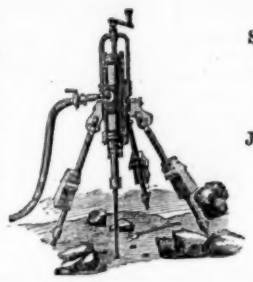
Patentees and Sole Makers of

"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.



FIRST SILVER MEDAL, Highest Award, Mining Institute Contest, 1881.

Three Makers represented.



FIRST SILVER MEDAL Highest Award, Royal Cornwall Polytechnic Jubilee Exhibition Contest, 1882.

Five Makers represented.

AWARDED SILVER MEDAL INTERNATIONAL INVENTIONS EXHIBITION, 1885.

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS,** equal to five times the Speed of Hand Labour

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES,** and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

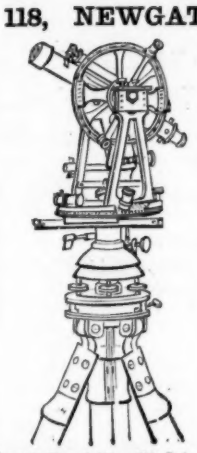
Estimates for ROCK BORING PLANT and GENERAL MINING MACHINERY on Application.

London Offices: 7 and 9, LEADENHALL BUILDINGS, E.C.

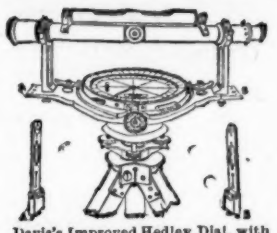
JOHN DAVIS AND SON,

ALL SAINTS WORKS, DERBY;

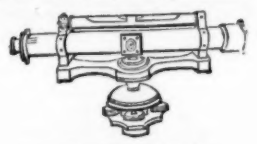
118, NEWGATE STREET, LONDON.



Transit Theodolite with Patent Hoffman Tripod Head, and Trough Compass.



Davis's Improved Hedley Dial, with Telescope and Sights Interchangeable and Patent Hoffman Tripod Head.



Dumpy Level with Hoffman Patent Tripod Head.

MINING, SURVEYING AND ENGINEERING INSTRUMENTS

THEODOLITES. LEVELS.

Davis's Improved Hedley Miners' Dials with HOFFMAN PATENT TRIPOD HEAD.
AND ALL DESCRIPTIONS OF MATHEMATICAL AND MINING SURVEYING INSTRUMENTS.

Revised Illustrated Catalogues Free to any Part of the World.
SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS
SECTION (B) ELECTRICAL DEPARTMENT.

Gold Medal Awarded Mining Exhibition, 1890.
"THE ENGINEERING TELEGRAPH CODE USED."

HENDERSON'S RAPID TRAVERSER

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Concentrator (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT ½ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.

CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS:

6, COLONIAL AVENUE, MINORIES, LONDON, E.

The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

8472 **Frederick Dumella Rose,** Box 14, Royal Exchange, Manchester.—Improvements in the construction of steam boilers.—April 30.

8530 **Thomas Henry Williams,** Claremont, Grieff Road, Wandsworth Common, London.—Improvements in steam and other fluid engines.—April 30.

8532 **Max Arndt,** 89, Chancery Lane, London.—Process and apparatus for regulating the admission of air to furnaces according to variations in the weight of the furnace gases.—April 30.

8536 **Edward Dwight Kendall,** 323, High Holborn, London.—A process for the recovery of gold and silver from solutions.—April 30.

8655 **James Shepherd and Davy Brothers (Limited),** 53, Chancery Lane, Improvements in tubulous sectional steam generators.—May 1.

8683 **Hugh Donald Fitzpatrick,** 70, Wellington Street, Glasgow.—An improved machine for breaking, crushing, grinding, and pulverising substances.—April 2.

8694 **George Rhodes,** 23, Paddock Street, Ardwick, Manchester.—An improved apparatus for regulating the draught in boiler and other furnaces.—May 2.

8712 **Caddy and Co. (Limited), and Leoline Edwards,** 323, High Holborn, London.—Improvements in or relating to furnaces.—May 2.

8735 **Frederick Clench and Thomas Scott King,** 166, Fleet Street, London.—Improved valve gear for steam and other fluid pressure motors.—May 2.

8772 **Edward Aubrey Martin,** 15, King Square, Bristol.—Improvements in furnaces.—May 3.

8794 **James Glover,** 8, Quality Court, Chancery Lane, London.—Improvements in drilling machines.—May 3.

8846 **William Ritchie Austin,** 16, Finkle Street, Stockton-on-Tees.—Improvements in steam generators.—May 4.

8853 **John Dawson, and George William Oldham,** Market Place, Huddersfield.—Improvements in the method and means for utilising waste heat from boiler and other furnaces.—May 4.

8685 **Frederick O Connor Prince,** 37, Cursitor Street, Chancery Lane, London.—Improvements in apparatus for stoking furnace fires.—May 4.

SPECIFICATIONS PUBLISHED.

7485, Merryweather and Jakeman, motor engines, 1894; 7648, Atkins, separating metals from ores, &c., 1894; 8166, Green, steam generators, 1894; 9732, Frederici, boiler furnaces, 1894; 11,138, Siemans, protecting metals for oxidation, 1894; 11,342, Bracewell, furnaces, 1894; 13,851, Gibbs, treating iron ores, 1894; 4071, Harrison, miners', &c., lamps, 1894.

The above specifications published may be had of Messrs. Rayner and Co., 37, Chancery Lane, London, at 10d. each, including postage.

The secretary of the ISLE OF MAN MINING COMPANY has sold 100 tons of this company's ore at £9 2s. 6d. per ton.

Mr. John Pullman and Mr. James Putney have joined the board of the GOLDEN DOVE MINING COMPANY (LIMITED).

The Directors of MILLS' DAY DAWN UNITED GOLD MINES COMPANY (LIMITED) announce payment, on 25th inst., of a dividend of 6d. per share.

Share certificates of the RHODESIAN MINING AND FINANCE COMPANY (LIMITED) are now ready for delivery in exchange for the bankers' receipts for the amounts payable on application and allotment.

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

Blagrove's Freehold Gold Mining Company (Limited).—Registered 4th May, by Snell, Son, and Greenip, 1 and 2, George Street, E.C. Capital £62,500, in 2s. 6d. shares. Shares: To adopt and carry into effect an agreement expressed to be made between the Kapanga Gold Mining Company (Limited) of the first part, and this company of the other part, for the acquisition of certain mines, mining rights, grants, leases, claims, concessions, and metalliferous land situate at Coromandel, Auckland, New Zealand; to develop and turn to account the same; and to carry on the business of a mining, milling, and smelting company in all its branches.

Anglo-Continental Financial Company (Limited).—Registered 7th May by Michael Abrahams, Sons, and Co., 8, Old Jewry, E.C. Capital £100,000, in £1 shares, 1000 founders. Objects: To carry on in England, on the continent of Europe, or elsewhere, every description of financial and banking business and all kinds of mining and exploration business. The first directors—of whom there shall be not less than three nor more than five—are to be elected by the signatories. Qualification, £100. Remuneration to be fixed by the company.

Anglo-French Exploration Company of Western Australia (Limited).—Registered 7th May by Jenkins, Baker, and Co., 134, Fenchurch Street, E.C. Capital £100,000, in £1 shares (1000 deferred). Objects: To acquire, examine, prospect, explore, develop, maintain, work, and generally turn to account any mines, mining rights, grants, leases, concessions, alluvial deposits, &c., which may be acquired by the company, and to carry on the business of a mining and smelting and metallurgical company in all its branches. The first directors—of whom there shall not be less than three nor more than seven—are to be elected by the signatories. Qualification, 100 shares. Remuneration, £100 each per annum—Chairman, £50 extra—with a percentage of the profits—divisible.

Granite Gold Exploration Syndicate (Limited).—Registered by J. W. Barton, of 13, Montague Place, W.C., with a capital of £1200 in £100 shares. Object: To acquire, develop, and turn to account lands, farms, and other property in the State of Colorado, U.S.A., or elsewhere. The directors are A. W. Barr, G. F. Budgett, and J. W. Barton. Qualification, £100. Remuneration not specified. Registered office, 30, Moorgate Street, E.C.

Cote d'Or Company (Limited).—Registered by A. L. Jones, 27, Bloomsbury Square, W.C., with a capital of £1000 in £10 shares. Object: To enter into an agreement with J. Smith and E. A. Cade, and to acquire and turn to account mines, mining rights, &c., on the West Coast of Africa or elsewhere. There are not to be less than four nor more than six directors, their remuneration being fixed by the company.

Tokatea of Hauraki (Limited).—Registered by Morley, Shirreff, and Co., 53, Gresham House, E.C., with a capital of £150,000 in 5s. shares. Object: To adopt and carry into effect certain agreements expressed to be made by this company with (1) J. H. Witheford, for the acquisition by purchase of certain mineral lands in the Hauraki mining district, Province of Auckland, colony of New Zealand, and (2) with S. T. George, by J. B. Smellie, his attorney, for the acquisition of other mineral lands in the same district, and to develop and turn to account the same in such manner as the company shall see fit. The directors are C. Hartridge, W. T. Holmes, J. E. Rush, and the Hon. J. B. Whyte. Qualification, £100. Remuneration, £500 per annum, and a percentage of the profits, the same to be divisible. Registered office, 5, Drapers' Gardens, E.C.

Vynne and Everitt (Limited).—Registered by Waterlow and Sons (Limited), London Wall, E.C., with a capital of £20,000 in £10 shares. Object: To acquire the business of corn, seed, coal, and coke merchants, &c., as hitherto carried on by the firm of Vynne and Everitt at Swaffham and elsewhere in Norfolk, and to carry on and extend the same; and, with a view to the above objects, to enter into a certain agreement. The directors are F. Everitt (with £400 per annum), W. R. Everitt (with £400 per annum), G. A. Collier (£100 per annum), and C. T. Collier (£100 per annum). Qualification, £1000. Registered office, Swaffham, Norfolk.

Josiah Wedgwood and Sons (Limited).—Registered by Waterlow Brothers and Layton (Limited), Birchin Lane, E.C., with a capital of £100,000 in £10 shares. Object: To acquire as a going concern the business of china and earthenware and encaustic tile manufacturers as hitherto carried on by the firm of Josiah Wedgwood and Sons at Etruria, Staffordshire; to adopt and carry into effect an agreement expressed to be made by the said company with the members of the said firm, and to carry on business as potters, china and earthenware, brick, tile, pipe, terra-cotta, and glass manufacturers and dealers, stone and flint grinders, coal owners, marl and clay pit owners. The directors are Lawrence Wedgwood, Cecil Wedgwood, and Francis H. Wedgwood. Qualification, £1000. Remuneration, £1:00 per annum, divisible. Registered office: Etruria, Stoke-on-Trent.

De Mare Incandescent Gas Light System (Limited).—Registered by M. Abrahams, Sons and Co., 8, Old Jewry, E.C., with a capital of £100,000 in £1 shares. Object: To adopt and carry into effect an agreement expressed to be made between the Société Anonyme des Brevets Etrangers de l'Hélio-gène of the first part Frederick de Mare of the second part, J. M. Caton of the third part, and this company of the fourth part, and, generally, to carry on business as manufacturers of and dealers in incandescent lights and other apparatus for increasing the illuminating power of gas, spirits, oil, and other light and heat producing agents; as electrical, mechanical, and general engineers, gasfitters, &c. The directors are the Hon. C. Y. Knatchbull-Hugessen, J. H. Sheldrake, J. W. Smith, and J. de L. Cohen. Qualification, £100. Remuneration, £1000 per annum, divisible.

Newport Red Ash Fuel Company (Limited).—Registered by Waterlow Brothers and Layton (Limited), 25, Birchin Lane, E.C., with a capital of £5000 in £5 shares. Object: To enter into a certain agreement, and generally to carry on business as manufacturers of and dealers in patent fuel, fire-lighters, &c. The directors are H. Lawrence, B. Willans, and D. Hopperfield. Qualification, 20 shares. Remuneration not specified.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

*** *We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.*

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Laying Pipes May 20 (*Knottingley*).—For the laying of cast-iron pipes and other appliances for the supply of water, for the Knottingley Urban District Council. Plans, specifications, and forms of tender may be obtained from the engineer, Mr. John Richardson, M.I.C.E., Methley, near Leeds.

Sinking Pit, May 20 (*Clydach Vale*).—For sinking No. 1 pit a further depth of about 85 yards or more, for Messrs. Thomas Riches and Co., Cambrian Navigation Collieries, Clydach Vale. Forms of specification and tender can be obtained at the colliery offices. Tenders to be sent to Mr. Edwin Hammond, manager.

Coal, May 24 (*Alder Act*).—For supply of about 3000 tons either of South Yorkshire or West of England gas coal, for delivery at Tongham or Aldershot Station, per schedule, up to June, 1896, for the Aldershot Gas and Water Company.

Reservoir, June 10 (*Holyhead*).—For the construction of an open reservoir of about 2¼ acres in extent, with filters, for the Holyhead Waterworks Company. Plans and specifications may be seen at the office of the Company, 17, Stanley Street, Holyhead.

Houses (*Whitburn Colliery*).—For building 43 houses, including the construction of streets and drains, at Whitburn Colliery. Plans and specifications can be seen on application to the Harton Coal Company (Limited), General Offices, Harton Colliery, South Shields.

THE CYANIDE PROCESS.

ITS PRACTICAL APPLICATION AND ECONOMICAL RESULTS.

By A. SCHEIDEL, Ph.D., E.M.

(Published by the Californian State Mining Bureau.)

XI. Exemplification of the Process—The process in various countries.

(Concluded from page 538.)

C. THE UNITED STATES OF AMERICA.

THE mode of working the plant is this:—The cyanide solution is charged into the agitator, the paddles are set in motion by revolving the shaft, the ore is charged by degrees, and the agitation is kept up for the required time, after which the pulp is discharged from the agitator on to the filter. The vacuum pump is then set in motion, and filtration under the influence of atmospheric pressure will at once commence. The solution will soon be sucked through; then washing follows, first with liquor from former operations, which has already passed through the zinc boxes, and finally with clear water. These operations of filtering and washing take about two hours. It is advisable to suck the tailings as dry as possible before each new wash is put on, which permits the complete removal of the gold solution with a very small amount of liquid, one half ton of which is sufficient for washing a charge of 2 tons of ore. If the filtration has been properly managed, no degree of continued washing can improve the results. The filtered solutions are clear. The first or original solution, together with the first wash, will be run off into one of the two solution tanks in front below the vacuum filter; the following washes run into the other. These tanks are 8 feet long by 3 feet wide and 3 feet deep, made of ¼ inch steel. Each of the tanks is in connection with a zinc precipitation box, 9 feet long by 21 inches deep and 9 inches wide, divided into 10 compartments; there is an interval of 1 inch between each two compartments. The false perforated steel bottoms of the chambers, which can be removed if desired, are 2½ inches above the true bottom of the box. The bottom of the box has a number of 1 inch iron faucets, one corresponding with the centre of each filter compartment; the sides of the box are 4 inches higher than the partitions within, which insures absolute safety against the liquid running over the sides of the box, if one or the other compartments should become blocked. The gold solution flows into the box through a 1 inch cock, enters the first compartment from below through the perforated false bottom, percolates the zinc shavings placed thereupon, leaves it, and enters the second, and so forth. A steel settling tank, 12 inches deep, 12 inches wide, and 9 feet 3 inches long, is placed below the precipitating box for receiving the bullion when cleaning up (see general demonstration of process above). The zinc used consists in turnings of 1-3000 inch thick, turned from cast zinc cylinders on a lathe; 2 lbs. fill one compartment. The solution passes through the box at the rate of 700 gallons in 24 hours. The bullion precipitation of the solution is very efficient as it passes from compartment to compartment, which amounts to passing ten times through a zinc column of 14 inches high by 9 inches square. As shown by the following table of analysis:—

One ton of liquid contains—	Gold. Ozs.	dwts.	grs.	Silver. Ozs.	dwts.	grs.
Originally	5	14	0	2	4	8
After 14 inches of zinc column		16	1		5	3
After 28 inches of zinc column		5	9		1	10
After 42 inches of zinc column		2	14			17
After 56 inches of zinc column		1	4			12
After 70 inches of zinc column		1	1			11
After 84 inches of zinc column			22			3
After 98 inches of zinc column			15·43			0
After 112 inches of zinc column			14·98			0
After 126 inches of zinc column			13·36			0
After 140 inches of zinc column			12·34			0

The solution leaving the zinc box contains only 12·34 grains of gold, or 0·0045 per cent. of its original contents, and only 3 grains of silver, or 0·0028 per cent. of the original silver value. Simultaneously the solution were analysed for available cyanide, but no decrease in the strength of the solution, which remained constantly at 0·3185 per cent., could be ascertained. "At another period I studied the solubility of zinc in cyanide solution, of which I give the following figures:—0·2634 grains of filiform zinc were submerged in 50 cc. cyanide solution of 0·26 per cent.; after seven days of frequent agitation these were reduced to 0·2584 grains, and after 56 days to 0·2252 grains, which means that after seven days 1·98 per cent., and after 56 days 14·47 per cent. of the zinc was dissolved. From this observation it follows that the loss of cyanide in the precipitating boxes, by means of its being taken up by zinc, is sometimes over estimated." The washes pass through a similar precipitating box. The liquids, when leaving these boxes, go as liquor No. 1 and liquor No. 2 into tanks of the same size as the solution tanks, from where a pump will deliver them wherever wanted. Liquor No. 1 serves for making up the new solution for the next charge; liquor No. 2 is used for washing purposes on the vacuum filter. No liquor ever leaves the works, the quantity in circulation remains stationary. The bullion obtained from the zinc boxes is passed, as formerly described, through a sieve on to the bullion vacuum, which itself is a miniature reproduction of the vacuum filter. It has the following dimensions:—Length, 2½ feet; width, 2 feet; total depth, 1 foot 6 inches. The perforated filter-bottom is fixed 12 inches above the true bottom. The bullion is very slimy; in fact, it is the more slimy the freer it is from zinc; its filtration and washing take some time. When the mass is tolerably dry, it is put into a wooden tub and treated with diluted sulphuric acid. The heat of the reaction I have always found sufficient to make the operation a speedy and satisfactory one; the bullion is then permitted to settle, the liquid is siphoned off through the bullion filter, and the solid matter is washed by decantation with water. This washing process is continued until all soluble salts are removed. The bullion is then partially dried on the filter, and finally dried in a small muffle furnace; complete drying of the bullion by artificial heat before the acid treatment is not advisable. The thoroughly dry bullion is pulverised and well mixed with soda and borax, and melted in a plumbago crucible as described before. The bullion thus obtained is 946 fine; the slag is clean, it contains the usual few granules of bullion, but, freed from them, does not give any assay results. The bullion could be still further refined, but to no commercial advantage. The steel of the tanks has not as yet shown any effects from cyanide, nor does it exercise any influence on the solutions. All apparatus is composed of plates and sheets riveted together; leakages, if any, can be easily stopped by a varnish made of asphaltum dissolved in bisulphide of carbon. As mentioned, this plant has been constructed for the treatment of slime concentrates from the canvas plant; such concentrates contain a varying percentage of carbonate of lime, in some instances as much as 95 per cent., which, however, does not interfere, mechanically or otherwise, with their satisfactory extraction by cyanide. Such conditions would make chlorination all but impossible, as alluded to before. For agitation the material requires an amount of solution equal to 80 per cent. of its weight, and six hours of time. The described plant is capable of treating a much larger amount of slimes than are usually produced per day by the canvas plant; its services are, therefore, only periodically required. The average consumption of cyanide, calculated from a large tonnage of slimes treated, amounted to 4·3 lbs. per ton, costing $2·27; the labour amounts to $1; the total expenses of treatment by cyanide to $3·50 per ton. The average extraction amounts to 93·18 per cent. of the gold, and 90 per cent. of the silver assay value; as high as 96·57 per cent. of the gold has been extracted in some instances. The extraction of the gold during the agitation goes on as shown by this table:—

Treatment of Slimes by Agitation.	Gold per ton.	Extraction per cent.
Sample before treatment	$88	
Sample after 1 hour's agitation	13	85·23
Sample after 2 hours' agitation	11	87·50
Sample after 3 hours' agitation	7	92·05
Sample after 4 hours' agitation	7	92·05
Sample after 5 hours' agitation	6	93·18
Sample after 6 hours' agitation	5	94·31
Sample after 7 hours' agitation	5	94·31
Sample after 8 hours' agitation	5	94·31

Within the first hour 85·23 per cent. of the gold is extracted; during the following five hours the increase of extraction is slow and irregular; after six hours no further extraction takes place. For experimental purposes I continued agitation up to 12 hours without improving on the result. The treatment of the slime concentrates by agitation was preferred on account of its quicker, cheaper, and better results, as compared with percolation. All Utica concentrates, as in fact all concentrates I ever had to deal with, contain a small amount of amalgam, part of which is found on the bottom of the agitator; part of it leaves the works with the tailings, and is recovered in Hungarian riffles and on amalgamated silver plates; part of the mercury goes undoubtedly into the cyanide solution, and is precipitated with the bullion in the zinc boxes.

Other sulphurets, such as the Frue vanner concentrates of the Utica, Madison, and Eureka Mines, were treated on a more or less extensive scale by the same plant; results were, however, not very satisfactory on account of their coarseness. All sulphurets of the Utica Mine are pure sulphide of iron. The fine canvas plant concentrates, although less clean, are as a rule richer in gold; their extraction averaged 93·18 per cent., whereas the vanner concentrates gave only 81·38 per cent., which, although reasonably good at the rate of $4 per ton cost of treatment, cannot compete with a chlorination treatment, which yields 90 per cent. of a $50 ore at a cost of $6·50. (The large size of the Utica chlorination works offers special advantages and permits chlorination at this figure, which is much lower than the cost anywhere else in California.) A large number of tests proved that a high percentage of the gold is contained in the coarser particles of the sulphurets; this will account to some extent for the comparatively low percentage of cyanide extraction. It would lead too far to give here the results of the large number of experiments in reference. The experiments were extended to roasted concentrates after their reduction to uniform size, which gave on a small scale excellent results (98·09 per cent extraction). I am indebted to Colonel Hayward, Mr. Charles D. Lane, and Mr. James Cross, of the Utica Mine, for their permission to publish the described results of the cyanide works which I erected for them. The cost of the plant is divided as follows:—

Grading and foundations	$200
Building	300
Shafting, belting, and putting into place	135
Agitator	260
Vacuum filter	165
Three tanks	160
Two zinc boxes	260
Two steel tanks	85
One vacuum pump	235
One liquid pump	130
Pipes, stopcocks, faucets, &c.	70
Total	$2000

The Standard Consolidated Mining Company, Bodie, California, started a 100 ton cyanide plant (50 ton vats) on September 17 for the treatment of tailings.

The amount of ores, fine concentrates, and tailings suitable for cyanide treatment is considerable in this State. There is no doubt that a great amount of gold is now being lost with the slimes in most mills here, as elsewhere, and in many instances dry crushing of the ore and direct cyanide treatment would vastly increase the returns. Coarse gold, if present, can be saved by amalgamation at some later stage of the manipulation.

Generally speaking, the number of commercial successes of the process in the United States is limited, although the number of tests and trials on a smaller or larger scale have been very numerous. The amount of ores suitable for the treatment is large, and the process is becoming more and more an established and acknowledged fact with the mining public. The miners of this country have long been looking for a process for the treatment of low-grade sulphurets which is cheaper in its application than chlorination. Under certain conditions the cyanide process meets the requirements, and will be found particularly valuable in remote places, to which the freight expenses are high. The weight of chemicals used in chlorination amounts to about 5 per cent. of the ore weight, but only to about 1 per cent. in the case of cyanide treatment. By chlorination 1 ton of chemicals will treat about 20 tons of ore, whereas by cyanide 1 ton will treat 100 tons. Moreover, the cyanide process does not require a special treatment of the ore for the extraction of the silver. No statistics in reference to the gold produced in the United States of America by the cyanide process could be obtained by the author.

D.—MEXICO, &c.

A MacArthur-Forrest company is introducing the process in that old mining country. No information, however, could be obtained from that company in reference to their results. In other parts of the world, attempts have been made, chiefly by the owners of the MacArthur-Forrest patents, to introduce the cyanide process. Ores from the Republic of Colombia are reported as having been treated with success, and the introduction of the process into that country is now intended. Negotiations for the introduction of the process into the Straits Settlements, Borneo, the mining States of South America, and that great gold-producing country, Russia, are now pending.

HERACLEA COAL MINE OWNERS AND THE TURKISH GOVERNMENT.—The owners of several coal mines at Heraclea have petitioned the Turkish Government for a reduction of the taxes imposed on their product, which, they say, are so heavy as to make it impossible for them to compete with foreign imported coal.

THE African Gold Recovery Company (Limited) announce that 53,500 ounces of gold have been recovered on the Rand and 9400 ounces in other districts, total 62,900 ounces, during April by means of their MacArthur-Forrest cyanide process. The March total was 62,500 ounces.

THE LONDONDERRY MINE.

By BRENTON SYMONS, M.I.C.E.

THE mining community of Perth has been considerably agitated by cables from London announcing that the phenomenally rich shoot of the Londonderry Mine had altogether failed to fulfil its golden promises, and that Bayley's Reward would close down its stamping mill indefinitely. These unexpected mishaps, following so closely upon the *fiasco* of the Wealth of Nations, give rise to forebodings that a panic might ensue, which would seriously check the flow of capital from the outside, and as the colony itself possesses little capital that can be devoted to the development of the extensive and widely separated mining fields, very gloomy anticipations prevailed.

Many and various have been the opinions expressed in regard to the real value and future of the West Australian gold fields. The statements that first flowed into the Press were chiefly from prospectors and speculators who were deeply interested, and who could scarcely be expected to report impartially. Later, self-dubbed experts re-echoed the tale, and confidently asserted that the gold had "come to stay" and made light of every difficulty, and promoters affected to believe them. When, however, the mines were visited by numerous mining experts from the Eastern colonies and from England, seeking properties for the capitalists they represented, the tale oft-told was found not so roseate, and so much difficulty was experienced in selecting a *bona fide* property at any reasonable figure that it is probable most of them would have returned without purchasing if they had not been constantly reminded from home that their employers were awaiting impatiently an El Dorado to float on a grateful public. The mining engineer soon realised the adverse conditions under which the mines must be worked, but the great difficulty that stood in the way of acquiring properties was the ever-present fact that no mining of any importance had been done. The prospectors, as soon as a vein was discovered, worked lazily on it so as to keep just within the labour conditions, and as soon as a few feet were sunk desired to sell out at a price quite disproportionate to the work done, or the value of the gold quartz exposed.

Thus, not only had the mining engineer scanty data on which to form a judgment of the value of the lode, but he was also buying a claim on which nothing serious had been done to open up the mine. It followed that those experts who valued their reputations were weeks, and even months, on the fields without being able to make a selection; whilst untechnical agents who know little of what they are buying, and dazzled by the gold in sight, bought claims quickly without hesitation. Even in the most favourable cases, with only surface indications to guide him, the agent was always buying something of which he was unable to predict the future with any degree of self-satisfaction.

Many mining authorities from Queensland have, after careful consideration of all the conditions, not deemed it advisable to invest, having insufficient faith in the permanent auriferous character of the veins, and their views are confirmed by some of the English experts. Doubtless these very experts would consider most of the veins payable if water were procurable in quantities sufficient for crushing, and if transportation were reasonable.

Possibly in the first flush of disappointment too much importance has been conferred on these salient difficulties, which other districts have suffered from, but have gradually overcome. The railway will, without the shadow of a doubt, be extended to Coolgardie within the next 15 or 18 months, and later to Hannan's, and the bugbear of transportation will thus be laid for the larger portion of the gold field. Provisions and supplies of every description will soon find their normal value by competition, rendered more acute by the existence of the iron road, and the health of the district will rapidly improve by the access of the mining population to fresh food of all kinds. The water question does not admit of such simple solution, but, judging from what has been done, most mines will be enabled to run 10 stamps with shaft water derived from a moderate depth, whilst at deeper levels 20 stamps or more may be operated, as at Mount Burgess and Fraser's Mines.

With respect to the value of the lodes, omitting those small rich patches of gold quartz known here as "shows," there are numerous battery reefs, worth ½ to 3 ounces, that will average a produce high enough to give satisfactory results and, if not too floridly capitalised, fair dividends. With the rail at Coolgardie the mines in the vicinity should, if properly managed, be capable of reducing a ton of quartz at an expenditure of 8 to 12 dwts. Of course this supposes that sufficient water is drawn from the mine itself for its treatment. Indeed, all the mining districts must as soon as the so-called "shows" have vanished, be content to treat 2 ounces, and in the distant future even less than 1 ounce, quartz; and the sooner prospectors and promoters divest themselves of the show craze and recognise this the sooner will the district assume a real mining and businesslike aspect. Mines should be run under good technical management and with severe economy, the same as any other commercial speculation. It is impossible that mining properties capitalised at five times their value can pay corresponding dividends, except by the rarest accident. It should be borne in mind that West Australia is producing as much gold as South Africa was in a similar stage of existence.

It will be a matter for sincere regret if the public mind should be influenced to too great an extent by the failure in depth of the rich ores of the Wealth of Nations and the Londonderry. It is contrary to mining experience that such phenomenal gold shoots should continue to any great distance; and it displays a want of knowledge of the occurrence of ore in veins to give fabulous sums for small surface shows, however tempting they appear. If the sudden, but, let us hope, momentary collapse of the market will induce the reputed owners of claims to decrease their demands to a reasonable limit, and the promoters to be satisfied with a fair pecuniary return for their efforts to place properties before a speculative public, which for want of knowledge trust them, the mining fields and investors will very distinctly benefit by the temporary scare. The failure of the shows in depth does not damn the district as a mining field, because it is extensive, and encloses hundreds of veins that will pay if honestly worked and wherever water is available. As there are districts where battery water will be insufficient or, perhaps, unattainable, some dry method of treatment will certainly be sought for, and inventors of separating machinery would do well to turn their attention in this direction, as, if successful, they would certainly receive an ample reward. Permanence in depth may be doubtful, but at least many hundreds of feet may be calculated on, and as the scarcity of water will rarely, if ever, permit the erection of a large plant at any one spot, the machinery can be easily shifted to another place when the paydirt gives out.

CAPE GOLD EXPORT.—The *Tantallon Castle* sailed from Cape Town on 15th inst. with gold to the amount of £163,000.

RECENT IMPROVEMENTS IN AMERICAN METALLURGY.

Mr. James Douglas's Concluding Lecture.

IN Mr. Douglas's fourth lecture, delivered on Monday evening last at the Society of Arts, he began by describing that branch of the pneumatic treatment of ores and mattes known in the States as Pyritic Smelting. He referred to the classical memoirs of Mr. J. Hollway, published by the Society of Arts in 1878, as the basis upon which all subsequent calculations and experiments have been made. The home in the States of pyritic smelting is the State of Colorado, where copper is in no mine the sole, or even the predominant product of value, but exists in small quantities in the concentrates of Gilpin county, in some of the deeper lead ores of Leadville, and in nearly all the ores of the San Juan region. Consequently, most of the 8,000,000 lbs. of copper which comes from Colorado, is really a bye-product, though it is used more and more instead of lead for the collection of the precious metals. There are four establishments in Colorado in which pyritic smelting is practised—namely, at Silvertown, Leadville, Kokomo and Boulder. Also at the Standard Works, at Durango, a low grade matte is made out of crude sulphuretted ores, which serves, after roasting, as a flux in their lead furnaces, owing to the scarcity of iron oxide in that region. In none of the works is fuel dispensed with. Where a cold blast is used the consumption of coke does not fall very much below that required in ordinary practice, but as the blast is raised the fuel consumption diminishes as well as the liability to derangement in the working of the furnace. At Silverton, with a blast of 1000° Fahr. the furnace is run with a consumption of 1 ton of coke to 33 tons of ore; with a 500° blast 2 tons of coke are consumed to the same amount of ore. But at Leadville, at the Bi-Metallic Company's works, it has been found more economical to dispense with the hot-blast, and to consume the fuel in the furnace itself. The form of the furnaces differs from the ordinary cupola in using a larger number of smaller tuyeres. The usual size of the cupolas is at the tuyeres 36 inches by 120 inches. Such a furnace has 24 2-inch tuyeres, and the blast at generally 15 to 18 ounces. The practice is to feed the solid pyrites in very large lumps, and to throw them as far as possible into the centre of the charge, throwing the ground silicious ingredients of the charge with the fuel around the periphery of the furnace. Limestone is invariably added, as it seems to prevent scaffolding, which is the chief obstacle in the way of pyritic smelting. Unless skill and particular precautions are taken, the pyrites of the charge being fusible at a lower temperature than that at which slag forms, runs down by a process of liquidation, leaving the silicious ingredients of the charge as a scaffold above the tuyeres. Theoretically, the furnace ought to work best without any carbonaceous fuel, as in that case the total oxygen of the blast is available for oxidising the sulphur and iron of the pyrites, but though the Cape Copper Company in Newfoundland is said to be successfully making a 10 per cent. matte without the addition of any fuel, no establishment in the United States has been able to attain this desirable object. This may be due to the peculiarly favourable character of the Newfoundland pyrites. Experience shows that about 20 per cent. of sulphur in the charge is the most advantageous proportion, but this must be contained in solid pyrites and not disseminated through a silicious gangue. These conditions it is [not easy to secure at custom smelting works in Colorado. Their existence at the Cape Copper Company's works in Newfoundland may be one reason why they are able to carry out pyritic smelting so admirably there. Of the subsidiary apparatus used in the smelting establishments of the United States, Mr. Douglas referred to the Baker and Root blowers, both of them semi-positive blowers, which have displaced the fan in all Western smelting establishments. He stated that the Root blower is now made to give a pressure of 7 lbs., which is sufficient to Bessemerise copper mattes in the trough converter. A No. 5 Root will force as much as 4000 cubic feet per minute under the pressure of 7 lbs. As a 5 ton converter consumes about 2500 cubic feet per minute, a Root blower will probably prove to be, if not the most economical in operating, far the least costly in original outlay for a Bessemer plant.

Mr. Douglas stated that the humid metallurgy of copper has not been practised to any great extent in the United States, chiefly because there have not been mined there any such deposits as those of Spain and Portugal, all of whose constituents can be utilised through treatment in the wet way by such a method as the Henderson Longmaid. The large deposits of bisulphide of iron, which are accessible to the centres of chemical industry, are either practically barren of copper, as is the case with those of Virginia and Massachusetts, or produce a residue too silicious to possess value as an iron ore, which is the case with those of the Province of Quebec. The largest consumer of Rio Tinto pyrites in the States is the Pennsylvania Salt Company of Natrona. It treats the cinder by the Henderson process.

No copper leaching is done in Montana, but there is an exceedingly interesting leaching plant as an adjunct to the concentrating works of the Arizona Copper Company at Clifton, Arizona. This company has for many years been concentrating its low grade silicious carbonate of copper ores. The concentrates are rich, but so are the tailings. These tailings, washed clean from all slimes are passed directly into large vats, and leached with sulphuric acid made by the chamber process from pyrites obtained from the company's mines. The most notable peculiarity of the plant is a large copper barrel partially immersed in the precipitating tank, in which scrap iron is kept in constant agitation with the copper liquors. By this means precipitation is effected in a very short time, and an exceedingly pure precipitate free from basic iron salts is obtained. Some cement copper has always been made in California by heap roasting and leaching from heavy pyritous ores at Spenceville and Copperopolis. The only peculiarity in the Spenceville operations has been the precipitation of the copper from the liquors in large tight wooden barrels, provided with a removable lining, and a valve which can be opened automatically to allow of the escape of the hydrogen. The precipitation being thus effected out of contact with the air, an exceedingly pure cement of 84 per cent. was the product. But though leaching has not been widely practised, some novel methods have been proposed and used to a limited extent. The first of any note was that devised by M. Monnier, which was in use at several works 30 years and more ago. He effected a more perfect sulphatisation of the copper than can be obtained from simple roasting by adding to his calcining charge sulphate of soda. He recovered the sulphate of soda by subsequent crystallisation from the mother liquors. Another method, which was handicapped by the intricate machinery through which it was attempted to apply it, was that known as the Whelpley and Storer method. They brought sulphurous acid from the roasting furnace into contact with oxide of copper suspended in a solution of chloride of calcium. The copper was rapidly dissolved as sub-chloride, which was precipitated from the solution by milk of lime as sub-oxide of copper, with the regeneration of the chloride of calcium. Another method which was practised in the United States, and at several points in Europe, is that known as the Hunt and Douglas. The reagent used is neutral chloride of iron in solution with a sufficiency of common salt to dissolve the sub-chloride of copper, which, with chloride of copper, results from the reaction of oxide of copper with chloride of iron. As part of the copper passes into solution as sub-chloride, and part as chloride, in the precipitation much less iron is consumed than if the whole of copper were present as a proto-salt. But the presence of sub-chloride in solution interfered with the application of the Claudet method for the precipitation of the silver when silver was present in the ore under treatment, while the presence of chloride of copper interfered with the rapid precipitation of the silver by means of metallic copper. This led Messrs. Hunt and Douglas to devise their present method, which is being applied on a large scale to the treatment of argentiferous copper-lead mattes at Argentine, Kansas. This method depends upon the reducing action of sulphurous acid on a solution of sulphate of copper in which half an equivalent of soluble chlorine is present. If the sulphurous acid be strong (say), of the average strength of kiln acid, the copper, to within about 1 to 1½ per cent., rapidly separates from the solution on the injection of the sulphurous acid gas as a heavy white precipitate of insoluble sub-chloride of copper. This precipitate, after being washed, can be converted into metallic copper by iron, or as is done at Argentine into sub-oxide of copper of 80 per cent. purity by milk of lime. In the first case, the chlorine is recovered as chloride of iron, in the other as chloride of calcium. The precious metals remain undissolved, and with the oxide of iron and sulphate of lead are passed directly through the lead furnace.

Mr. Douglas described an interesting process which was devised by Mr. J. J. Cooke for extracting the precious metals from copper mattes, and which has been practised for many years at Pueblo, Colorado. It consists in immersing ground matte in a series of baths of lead, maintained at a temperature below that of the fusion of the matte. The gold and silver are rapidly and very perfectly extracted in this way from the matte, which is subsequently, by what the author calls a process of scorification, reduced to a metallic sponge by exposing it to a heat below that of fusion in a roasting furnace. All volatile elements are eliminated, and a mixed iron and copper sponge obtained, remarkably free from sulphur, arsenic, and antimony. This sponge is then fused with silicious ores in an open furnace for the separation of the iron as slag, and of the copper as metal.

But by far the largest establishment in which silver and gold are extracted from copper mattes, otherwise than by electricity, is the Argo Works of the Boston and Colorado Smelting Company. There, under the metallurgical management of Mr. Richard Pearce, the Ziervogel method is practised with certain modifications. Mr. Douglas had already described in previous lectures the novel roasting furnace which Mr. Pearce has invented, and which he uses; also the stupendous reverberatory furnaces which he has erected, and which he finds so economical. To separate the precious metals, he applies a careful Ziervogel roast to his first mattes, extracts as sulphate the bulk of the silver, then re-smelts the residue with auriferous pyrites, making in this second fusion rich matte and copper bottoms, which contain the gold. The matte he reroasts with sulphate of soda, and obtains in that way a very perfect sulphatisation and final extraction of the silver. How he treats the bottoms has always been maintained a profound secret, and though every metallurgist indulges in a guess as to how it is done, the uniformly cordial treatment he receives at the Argo Works renders it ungracious even to express in words what his guess may be.

The electrolytic treatment, however, of copper carrying the precious metals is, if not superseding all other methods, rapidly taking the lead. The total capacity of the Eastern and Western electrolytic works of the United States approximates 200,000,000 lbs. annually. Mr. Douglas did not know of any essential improvements practised on a large scale which have not been adopted somewhere in Europe. The same, he said, was true of the manufacture of bluestone, of which considerable quantities are made, even in the same establishments, such as those of Baltimore and the Laurel Hill Works of Brooklyn, which turn out electrolytic copper. The manufacture of bluestone in the United States is largely in excess of the home consumption.

In discussing the metallurgy of lead, Mr. Douglas stated that in the Rocky Mountains region, where up to recently about seven-tenths of the silver production in the United States was collected in the lead furnace, the same tendency has been observable as in other fields of metallurgical enterprise—namely, that of working with large furnaces and employing automatic machinery, and designing the works so as to economise labour. Although the lead industry of the Mississippi is insignificant compared with the total, representing only about one-fifth of the lead product of the United States, it is in that region that some of the most interesting modifications in lead smelting have been introduced. The lecturer showed a series of diagrams, illustrating the water-jacketting of the Scotch hearth, as used in Missouri, and the larger furnaces of the Scotch hearth type, introduced by Moffet, and operated with a hot blast, with a view to making as much fume as possible. He showed the Lewis and Bartlett apparatus, by which the grey fume from the hearth is collected and the slag-eye furnace provided with a double tier of tuyeres, in which these grey fumes are re-smelted with slag and some crude galena. The product of this furnace is almost entirely a refined white fume, which, after being cooled, is collected by the Lewis and Bartlett process in bags, and is found to be a more valuable product than metallic lead itself. Mr. Douglas closed his lecture by remarking that from the hasty review of American departures from European precedent which he had been able to give, it would be seen that though American metallurgists cannot claim the honour of any great metallurgical discoveries, they have brought to bear on the practice of their profession acute ingenuity in altering machinery and methods so as to adapt them to their altered surroundings. The high price of labour coincident in some instances with very lean ore, has necessitated the adoption, wherever possible, of automatic machinery, arranged, so to speak, consecutively, which does its work very cheaply, if not always very perfectly. The distance from market has excluded American metallurgists in many instances from taking advantages of certain economies which materially assist their foreign rivals, notably in the saving and utilisation of bye-products. The cost of fuel, and sometimes of fluxes, makes it betimes more profitable to lose than to save. How far it is right to waste Nature's resources in order to realise immediate profit is a matter for the economist and the legislator to decide. The metallurgist of America is fully conscious of the imperfections of his practice. But, having nevertheless set before himself the task of developing, with profit, the mineral resources of the country, he has fulfilled it by dint of enterprise and originality, wastefully it may have been sometimes, but yet successfully. Where, however, through improved means of transportation, fuel and fluxes have become accessible, he has shown, as in the case of lead smelting in Colorado and Utah, that though in the early days he reluctantly adapted himself to circumstances, and in order to make lead at all had to make foul slag, to-day he can make his profit by doing work so excellent from both the theoretical and practical points of view, that it may safely challenge comparison with the best performances of Europe. Mr. Douglas drew attention to the fact that in every department of metal working, whether it be of iron and steel, copper or lead, the price of the finished product in America is rapidly approaching, if it has not already touched the price in Europe. This has been attained despite the high cost of labour in the United States by the much wider and more extensive use of machinery in every department. He admitted that the American metallurgist has a decided advantage over the European in that he has not to constantly fight against prejudices, habits, precedents, and, to a certain extent, the admitted interest which the labour classes in Europe have in certain industries in which for generations they have been engaged. He pointed out, however, that unless some means can be devised of following the methods adopted in the States, it will be very difficult for European mills and furnaces to maintain successful competition.

MEETINGS OF MINING COMPANIES.

MASON AND BARRY, LIMITED.

A good year's working.—The prospect brightening.

THE third annual general meeting of the shareholders in Mason and Barry (Limited) was held on Monday, at the Cannon-street Hotel, the chair being occupied by Mr. FRANCIS RICARDO.

The SECRETARY (Mr. J. G. Barry) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I beg now to submit for your approval the company's general balance-sheet at 31st December, 1894. In doing so I must remind you that, as the Chairman stated at our two last annual meetings would be the case, the policy of the directors during the past year has been the same as it was in 1892 and 1893—namely, to aim chiefly at turning into cash the item in the balance-sheet representing the unwritten-off cost of the ore lying at the cementation works. In this we have been very successful, for you will notice that the amount at which the item stood in the last balance-sheet—namely, £312,250 has now been reduced to the sum of £254,637, or a reduction of £57,613. I am glad to be able to bring prominently under your notice that, as shown in the directors' report, the quantity of ore sold for its sulphur value during 1894, including both fresh broken ore and washed ore from the cementation works, has reached the important total of 233,729 tons or 50,000 tons in excess of the quantity sold in 1893. During the latter year we also considered our sales of sulphur ore highly satisfactory, as the quantity sold exceeded the sales of 1892 by 66,000 tons, so that the year 1894 shows an excess of 116,000 tons sold over the sales of 1892. Although the board will continue to make every effort to increase these sales we are afraid that our shipping capabilities for sulphur ore will not allow of very much expansion in this quantity, but it must be satisfactory to you to know that, notwithstanding the large annual sales referred to, and, bearing in mind the smaller quantity of ore that we now take out of the mine, we have in stock no less than one and three-quarter million tons from which we have extracted the copper, and that this quantity alone, would, at our present rate of shipment, meet our requirements for fully the next seven years. You will notice on the balance-sheet the investments are inserted at the prices at which they were last valued. Had they been taken as in previous years at the market prices of the 31st December last, they would have shown a nominal profit of £6000. The directors did not consider themselves justified in adding this paper profit for the purposes of dividend, as they are compelled to hold the stocks till such a time as the company's financial position may again justify them in recommending the return of a further instalment of capital, and it is uncertain whether the market prices of the stocks will then rule as high as at the present moment. The board have deemed it more prudent to let the investments stand at the values which were current at 31st December, 1893. You will also have noticed, I am sure with satisfaction, that although the repayment of capital had absorbed £185,172, less the amount of £10,328 shown on the balance-sheet as unclaimed at 31st December last, or (say) £174,834 net, the cash assets, which stood in the balance-sheet at 31st December, 1893, at the sum of £273,587, have only been reduced by the sum of £109,492, their total in the present balance-sheet being £164,095. Our make of copper precipitate during last year was slightly less than in 1893, the exact figures being 3221 tons fine copper in 1894, as against 3566 tons in 1893. Looking at the much smaller breakage of ore in the mine during the last two years this reduction is not unsatisfactory, and I may add that owing to a heavy rainfall last winter we have now a very large supply of water; all our reservoirs are full, and consequently we hope that our make of fine copper in 1895 will at least equal our make of last year. As referring to the profit and loss account the small excess in the first item under the heading "Management Expenses in England" is explained by the additional legal and other expenses consequent on the application to the Court for its sanction to the repayment of capital. The farther item on the debit side of £486 8s. 8d. represents a donation or gratuity given to two old employees, the sum having been invested on their behalf in the purchase of annuities. The actual cost of the annuities was one-third greater than the sum stated, but that extra amount has been paid by the old partners Mr. Mason and Mr. Barry, on account of the earlier portion of the employment of those old servants having been passed in the service of the original private partnership. (Applause.) I do not think there are any other items in the accounts on which I need comment. With respect to the current year, if we are able to place before you at our next annual meeting so good a result of the year's working as we are able to do to-day, we shall feel satisfied; as without doubt the wisest policy for this company to pursue is to continue to turn into cash the heaps of ore lying at the cementation works, on which as respects copper production, the royalty has already been paid. The more quickly we succeed in doing this, the sooner shall we be in a position to return you a further pound a share, and, of course, if the value of copper was to improve materially, so also will our sales of copper precipitate yield better results, and in that case we might hope for a better dividend. In conclusion, I have now to inform you that recently the company has acquired from the Portuguese Government concessions for two additional deposits of ore, one of which is almost adjoining the San Domingos Mine and the other lies at a distance of some four or five miles. Of the former, our present opinion is that it is too insignificant from its surface indications to be worth our while to expend any considerable sum of money on it, but the other deposit exhibits sufficient appearance of ore to justify us in sinking and driving for the purpose of ascertaining whether there exists a mass of pyrites of any size and what is the character of the ore. This exploration is now in course of being carried out. We do not wish you to base any expectations on the result, but should it by any chance prove a mass of pyrites containing a reasonable percentage of copper, then we shall hope for a good financial return from the exploration. Indeed, I merely mention this fact because we wish to keep you well posted as to any new steps we may take. I desire to add that this meeting would have been called for last Monday, but it has been postponed until to-day in order that the Deputy-Chairman who has just finished his periodical visit to the mine might be present; but as I have already mentioned

to you, Mr. J. F. Mason has been unavoidably detained in Lisbon, and he has not as yet arrived in this country. (Applause.) The Chairman concluded by moving a resolution for the adoption of the report and accounts and the declaration of a dividend at the rate of 2s. 6d. per share.

Mr. H. E. BEDDINGTON seconded the motion.

A SHAREHOLDER enquired whether the board had taken into consideration the advisability of moving into smaller premises, the freehold of their own having cost £18,000 and representing a rental of between £900 and £1000.

Mr. BEDDINGTON said that the board had taken this matter into consideration, and had come to the conclusion that no change should be made. If the £18,000 were realised and invested no more than 3 per cent. would be realised, or £600 a year, and the board were strongly of opinion that offices which would as conveniently accommodate their staff could not be had except for a higher sum. Under these circumstances the board had decided to let the matter remain as at present. (Applause.)

Mr. GRIFFITHS thought the report very satisfactory. He wished, however, to know what was the basis upon which the stocks of ore and copper precipitate were valued.

The CHAIRMAN replied that they were valued at and below cost.

The motion for the adoption of the report and accounts was then put and carried unanimously.

The retiring directors, Captain Heathorn and Mr. Francis Ricardo, were re-elected, and the auditors, Messrs. Josolyne, Miles, and Blow, re-appointed.

A hearty vote of thanks to the Chairman and directors for their able conduct of the company's affairs was proposed by Mr. GRIFFITHS, who said that all the shareholders who studied the report must be completely satisfied with what had been done.

The vote having been seconded and carried unanimously, the CHAIRMAN briefly acknowledged it, remarking that for some little time trade prospects had been brighter.

The proceedings then terminated.

PESTARENA UNITED GOLD MINES.

A rearrangement of capital unanimously agreed upon.

An extraordinary general meeting of the 12½ per cent. first preference shareholders of the Pestarena Gold Mining Company (Limited) was held yesterday, at the Cannon-street Hotel, under the presidency of the Hon. HUBERT HANBURY-TRACY.

The SECRETARY (Mr. Richard Garland) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—The object of the present meeting is to consider, and, if thought fit, adopt the measure proposed in the circular of the 4th inst., as the first step in the direction of placing this company's position, as regards its share capital, on a satisfactory footing. It was announced to you at the general meeting in December last that we had made arrangements for the preparation of a scheme by a competent and thoroughly independent person, upon whose ability and judgment we could rely, and that we had had recourse to this means on account of the difficulties and complications that presented themselves in connection with the rights of the several classes of shareholders, and the large amount of dividend in arrear that had accrued upon the preference shares. No doubt we should all have wished to have had the scheme before us to-day, but I am convinced that the course which is suggested in the circular will be the best in the interests of the shareholders, and am glad to know that a large proportion of the shareholders have already given expression to the same view. My reason for this is as follows: It must be remembered that there are three distinct classes of shareholders—the first preference, the second preference, and the ordinary, all having their separate rights and claims on the company. Secondly, it must be remembered that during the 28 years that the company has been in existence, no dividends have been distributed, except that in one year interest was paid to the first preference holders. The result is that certain rights have in the meantime accrued, and the relative interests of the different classes of shareholders have become involved. The consequence of this is that shareholders of all classes, who have not had the opportunity of thoroughly studying the position, take very different views of what would be a fair adjustment of their interests. There are about 700 shareholders, and it may be said *quot homines, tot sententiæ*. Now, I do not for one moment consider that the differences of opinion arise from any wish on the part of shareholders to obtain for themselves undue advantages at the expense of those who hold shares in other classes, but these differences are, in my opinion, simply due to the impossibility of any shareholder being able to gauge accurately the value of the different interests in this undertaking, as they at present exist, without having all the facts and figures before him, and being able to give the matter very careful study. Under these circumstances, I am sure that it will save endless expense of time and money, both of which are very valuable to the company, if we decide to adopt the plan recommended in the circular. The directors have put before Mr. Young all the facts and figures that can possibly be of service to him, and Mr. Young has intimated that he sees his way to formulate a scheme which shall justly determine the various interests of the shareholders, and put the company's affairs on a proper basis, provided that the shareholders agree to accept him as arbitrator in the matter; and the directors are convinced that you may with confidence leave the matter in his hands. You will observe, when the agreement is presently read, that every shareholder will have the right to submit to Mr. Young his views on the question, and that Mr. Young reserves to himself the right to seek information from any shareholder he may like to call upon. It may be right to state that it will be part of the scheme to introduce a little more capital into the concern, as there are three additional mines of much promise now being opened up, the cost of which ought no longer to be borne by the revenue account, but by capital provided for the purpose, and thus the dividend prospects will be so much improved. The amount of such new capital will not be large, but sufficient for the company's requirements as far as we can foresee them. For the benefit of those who have only lately acquired an interest in the company, I will state briefly what the capital account consists of, and the position as regards the preference and ordinary shares. The ordinary share capital issued was 67,809 shares of £3 each, representing £203,427 upon which no dividend has ever been paid. Of the 12½ per cent. preference shares, 4343 of £3 each were issued in 1869, representing £13,029. Upon these the first year's dividend was paid in 1870-71, but nothing since that date. Of the 10 per cent. preference shares, 6250 of £3 each were issued in 1871, representing £18,750, upon which no dividend has yet been paid. In the year 1875, after the money raised by the preference shares had been expended, the company was compelled to borrow the sum of £16,000, which was obtained from the Bank of Alessandria on mortgage, and in 1877 a further sum of £12,000 was raised on a second mortgage in this country. The first loan was gradually paid off, with interest, until in December last it was finally extinguished. The interest on the second loan, which had fallen sadly in arrear, has now been paid up to date. These payments absorbed large sums of money spread over a number of years and so the profits, which were made in fair amounts and with great persistency during this long period, have been employed in liquidating debts incurred for carrying on the concern, and the shareholders did not touch any portion of them. As you are aware from the reports that have been regularly published, our mines have improved, and have lately been giving better results. A profit of £9115 was made last year, and it is hoped that something approximating this amount will be made for the current year, and it seems that there would be every prospect of being able at no distant date to begin making returns to the shareholders if the capital account can now be arranged on a reasonable basis. The first preference shareholders for the most part hold second preference shares, and the preference shareholders generally are almost entirely holders of ordinary shares. It appears, therefore, manifest that it is in the best interests of the preference, as well as of the ordinary shareholders, that some arrangement of their rights should be effected, and your directors are of opinion that if in certain directions there should appear to be sacrifices called for, they are likely to be more apparent than real, and that so long as each class has reserved to it in one form or another an interest in the company proportionate to its rights, the shareholders will have much reason to be satisfied. The shareholders must also take into account that there is a probability of their getting dividends regularly upon such stock as they may hereafter hold in the company, and of finding themselves in possession of a marketable security, which does not at present exist in the preference shares, and further that the ordinary shares, whose chance of getting a dividend has hitherto been most remote, would be very likely to participate in the company's profits at an early date, and assume a position of much greater favour in the public estimation. In asking your favourable consideration for the resolution which I am about to propose, the directors have one object and one object only, and that is to ensure the speedy settlement of the question on an absolutely fair and equitable basis; and on behalf of Mr. Young, I can say with confidence that he has no other interest whatever in the matter, except that he may be able to propound such a just and impartial scheme as may enhance the prosperity of the company and do credit to his high reputation. I will now ask Mr. Slaughter, the solicitor who is advising Mr. Young in this matter, to read to you the agreement which is the subject of the resolution I shall afterwards submit to the meeting. (Applause.)

Mr. SLAUGHTER having read the agreement,

The CHAIRMAN proposed the following resolution:—

> Resolved: That the agreement now submitted to the meeting, and made between Frederic William Coles, of Bank-buildings, Hastings (thereinafter called "the Preference Shareholder") of the first part, Richard Garland, of 7, Queen-street-place, London, E.C. (thereinafter called "the New Preference Shareholder") of the second part, Richard Donagan, of 182, Alexandra-road, London, N.W. (thereinafter called "the Ordinary Shareholder") of the third part, the company of the fourth part, and Alexander Young of the fifth part, being an agreement for the reference to the arbitration of the said Alexander Young of the settlement of a scheme for the re-arrangement of the capital of the company and the rights as to dividend of the several classes of shareholders, be and the same is hereby adopted on behalf of the 12½ per cent. first preference shareholders of the company represented in person or by proxy at this meeting.

Mr. F. W. COLES seconded the resolution, saying that he represented two-fifths of the preference shareholders, who, after carefully considering the matter, had come to the conclusion that it was much better to leave the interests of all parties in the hands of Mr. Young, who was eminently qualified to undertake the task.

Mr. GASKELL said he was cordially in favour of the arrangement, but there were one or two questions he desired to ask. The Chairman had stated that it was the intention of the board to increase the capital, and he hoped that they would increase it sufficiently to pay off the debentures. He would also like to have the assurance of the directors that the proposed arrangement would not endanger the concession granted to them by the Italian Government.

Mr. BAINES believed that if the scheme were carried through the shareholders would never have cause to regret it.

The CHAIRMAN stated that the question of paying off the debentures would be left to Mr. Young. The shareholders might rest assured that there was no fear of endangering the concession by carrying out the arrangement. In fact, the object of doing it in the manner proposed was to prevent any such danger.

The resolution was then put and carried unanimously.

Subsequently extraordinary general meetings of the new 10 per cent. preference shareholders and the ordinary shareholders were held, at which the same resolution was passed unanimously.

Mr. R. DONAGAN, in seconding the resolution at the ordinary shareholders' meeting, reminded the shareholders that the agreement had to be ratified by three-fourths of the shareholders; and as the company was an old one, and consequently a great many of the shareholders had disappeared or had died, it was very necessary that those who were alive should ratify it in order to carry out the arrangement.

A vote of thanks to the Chairman and directors, heartily given on the motion of Mr. BAINES, concluded the proceedings.

AFRICAN ALLUVIAL GOLD MINES.

Operations already commenced.—Economy to be observed.

The statutory general meeting of the African Alluvial Gold Mines (Limited) was held on Tuesday, at the Cannon-street Hotel, Mr. G. F. TAVENOR presiding.

The SECRETARY (Mr. Henry Richards) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen—We are met to-day to inaugurate our new undertaking—an undertaking which has started with most hopeful prospects, and even a trifle beyond prospects; but I may tell you, in the first instance, the present financial position of the company. The capital of the company consists, as you are aware, of £150,000. Of that amount £30,000 has been reserved for working capital; £15,000 has been issued as working capital, and we have that amount to proceed with. The properties belonging to this company are situated in the Massi Kessi district of Moçambique, and having been selected by a mining engineer who has for some time resided in that region, we are assured that, with his local knowledge of facts bearing upon the position of claims there, we possess, I should say, almost the first group of alluvials within the region of the Companhia de Mozambique. They are very advantageously situated, all being within easy reach of the township of Massi Kessi, and, therefore, not far from the line of railway which is now being completed to pass through that region on its road to Umtali. The properties consist of 79 claims, and comprise 30 on the Zambusi river, 15 on the Munene river, 24 on the Revue river, and 10 on the Imhamcarara river, so that you perceive, gentlemen, we have got these claims situated on rivers which give great promise of yielding a very large supply of gold so soon as our operations commence. Now, in regard to our operations, I cannot do better than give you some extracts from the reports of Mr. Niness, the local manager. He states in a letter, dated 25th March, and I think I had better read the extract to you, because it is a very important one, and shows fully what our work there consists of:—"I intend working on the Zambusi claims by means of sluice-boxes, which is the cheapest method of alluvial working employed. The boxes will not cost more than a few pounds each, but for a complete plant we shall require plates, quicksilver, and muriatic acid, amalgamator, retort, blankets, and a bath for washing blankets and tools. Locally, I have procured sufficient material to commence sluicing when the boxes are fixed. I cannot say what the complete plant will cost until I receive invoices, but it ought not to exceed £200 when delivered on the spot. Since we have commenced working a considerable amount has been done in an incredibly short time in the shape of a camp—a fairly good house has been built, and huts for Kaffirs, and a large space of ground has been cleared of grass, which at this time of the year measures 14 feet high in places, more especially about the rivers. Water-races have been constructed and dams built with sacks to turn the course of the river. A bridge has been placed over the Zambusi, and roads made. Expect two sluice-boxes to be working to-day or to-morrow. Will wire you when this takes places. I have every faith that, even in our present primitive style of commencing work, a profit will be made." Now, gentlemen, it is very rare indeed that at the statutory meeting the Chairman can inform you that the manager on the spot has actually already constructed sluice boxes, and, so to speak, made a fair start to collect pay gold, but in our case such is the fact. Mr. Niness, cabling us in regard to this Zambusi operation, says:—"The alluvial claims subjected to a thorough test give a better result than we expected. Diggers have been making small profits all the time. Sluicing largely will leave a good margin of profit. The conditions and prospects of the workings are most encouraging." Again, he cables and says:—"Sluice-boxes working, Zambusi; result is satisfactory." Now, gentlemen, if you read these two cablegrams, with the extract which I have just given you, you will see that what Mr. Niness says in his letter of March 25 has been borne out by results when the sluice boxes were established, and that must be very gratifying to us. In another cablegram which brings the information up to a later date, he says:—"Alluvials all payable. I am sure it will be a very profitable investment." That is a month later than his first cablegram. Now we come to another letter, which is dated March 29:—"We have been pegged out on every side by old alluvial diggers, which speaks for itself in reference to the value of our ground." A cablegram received on the 11th of this month goes on to say:—"Alluvials—water ditch—good progress is being made. Entire length required is 12,000 feet, of which 3900 feet already completed. French company has commenced working its alluvial. Excitement in the district very great. Proceeding carrying out exploration diamondiferous claims." Now, gentlemen, you will understand from what Mr. Niness tells us in his letters and cablegrams that this company is not in a dormant state, neither will it have to wait six months before it commences operations. It has already started, and before long we have no doubt that we shall receive a very satisfactory report indeed from Mr. Niness as to the progress of this important work. It must be borne in mind that we are actually searching in virgin soil, and it is now for us to gather gold from deposits which have existed for centuries. I do not wish at all to be sensational, nor to put undue hopes in the mind of our shareholders, but certainly from the statements of experts who have surveyed and made a thorough examination of these localities, there is no question but what the beds of the rivers in the Mozambique territory, especially on the Zambusi, Revue, and Inhamcarara rivers, and those near the Massi Kessi township, will show results which will be startling in the future, when it is known what English enterprise has done to open this vast territory. While on this subject, I might remark, gentlemen, that there is another point which this company has lately considered and taken up, Mr. Niness, our manager, made during last year a very interesting voyage of discovery towards the big and comparatively unknown Zambesi. He travelled over a large area of wild country, and saw sufficient to warrant a very sanguine expectation on his part that there were very large deposits in that region as yet undiscovered. One very important fact which he elicited was that in a certain district, which I am precluded, for reasons, of course, known to everyone, from mentioning, there existed the very self-same appearance and conglomeration of substances which always meet together when diamonds are discovered. Now, Mr. Niness, so soon as he saw these indications, at once pushed vigorously ahead, and instituted a search and general prospecting around that region. His efforts were requited by coming upon blue ground, which is a very strong supporter of immediate diamond discoveries, as exemplified at Kimberley on all the mines which are now working there, and creating such a furore in the world, and such results to many of their discoverers. He has taken the marks and position of these very important claims—so important that on his return to Massi Kessi the then Governor of the Mozambique territory considered his discoveries of such a nature that he gave him at once the right to locate 100 claims wherever discovered. Now, gentlemen, what I wish to say is, that the African Alluvials have taken up this diamondiferous discovery. They have organised a party, and that party is now nearly equipped and ready for the field, and will at once proceed to this region from Massi Kessi, and locate these claims. The expense will not be a very large item, inasmuch as we are working on the most economical basis, so as to preserve our capital as intact as possible for further operations. A cablegram from Mr. Niness informs us that the diamondiferous party is now being equipped, and will shortly take the field for the purpose of carrying out the intentions we have in view. That being so, gentlemen, we have, as you will observe, two strings to our bow. We have, in fact, within our possession what, we are informed, are valuable alluvial deposits, some of them almost on the eve of showing results, and some practically within a very short period will undoubtedly show such results, because everything we hear from that side points to those indications. Now, gentlemen, supposing that the diamondiferous exploration venture turns out to obtain claims to the value which it is not for me at the present juncture to advert upon, but of sufficient value to cause our shareholders to feel that they are not only interested in a gold-producing territory, but that they have obtained the advantages of securing a diamondiferous tract of country in an unexplored, and, up to the present time, unknown spot for diamonds—what will that mean to us—what will it mean to this company? I leave our shareholders to explain themselves what it may be; but without being at all too sanguine, without saying that these diamonds are there, and that we are going to reap the riches of the De Beers Mine, I do say, having already proved in Mr. Niness a man who thoroughly understands his work, to establish such work as metals and stones in connection with mining affairs, I do say that we are as well situated as any company could possibly be for making a very large bid to secure to our shareholders a future not only of success, but of unparalleled prosperity. (Applause.) Having said that, I may tell you, to resume what is being done now, that Mr. Niness informs us in a recent communication that he has cut down some very fine trees, the country being well wooded, and made an arrangement for the necessary amount of timber for making sluice-boxes. Now this, gentlemen, is an important factor, because these sluice-boxes cost money, and having to send their timber long distances, as is done sometimes in Africa, where very little timber exists on the spot, it costs very large sums not only for the timber when bought, but also for its transport. That is a great point, and he also says that the work carried on by our alluvial company has created such an excitement in the district that people are rushing all round and pegging out claims near our works. Now they would not do that—for people do not go to those regions for the purpose of pegging out claims—unless they see something worth their while to peg out. That is a satisfactory point of importance to us—that we really and truly have got something which, in the minds of those on the spot, and who are best able to judge, is of a most promising character. (Applause.) The arrangements for conducting the sluice operations were actively and energetically being carried out by our manager in all ways needful, and here again I may tell you that, not being of an extravagant character, thousands of pounds will be saved by an economical and energetic policy of only spending the necessary amount to money to secure the results which are aimed at. That being so, I think, gentlemen, at our next meeting, when we have the pleasure of seeing you again, you will find that we have done our best to make a very successful and hopeful future for you, and that we shall then in all probability have to declare what I hope will be a very large dividend. (Applause.) Then, again, there is the fact that this company having so large a number of claims—namely, 79, may be the parent, and possibly the grandparent, of other companies. We may ourselves be in the position, though possibly in a smaller way, of the Companhia de Moçambique or the Oceana—in the happy position of having subsidiary companies, having realised our large profits from those companies, and yet seeing them keeping up with their parent in their prosperous and hopeful careers, while at the same time we shall have quite sufficient left on hand for our own exertions and returns from our own sluice-boxes. I do not think I can say more than that we have met to-day simply to perform a perfunctory act of the Legislature, by meeting the shareholders four months after the inauguration of the company. But from what I have told you, you can see that we are not only able to say the property is transferred, but that we have cable advice of the fact that we are actively progressing to an end, which will shortly produce a result which is looked upon as being very hopeful by our manager. If any gentle-

man would like to ask any questions I shall be delighted to answer him to the best of my power on this occasion. (Applause.)

The Rev. H. HIRSCH proposed a hearty vote of thanks to the Chairman for the very encouraging report he had given. His very hopeful speech would no doubt inspire them all with goodwill towards him and the other directors of the company. (Applause.)

Mr. COHN seconded the resolution, which was put, and carried unanimously.

The CHAIRMAN replied on behalf of himself and the board, stating that the directors would do their best to make the company a great success, and the proceedings terminated.

BAYLEY'S NO. 2 SOUTH GOLD MINING COMPANY, LIMITED.

Statutory meeting.—Discovery of another reef.

The first ordinary general meeting of the above company was held at the company's offices, No. 151, Cannon-street, London, E.C., on Tuesday, Captain W. B. MCTAGGART (the Chairman) presiding.

The SECRETARY (Mr. A. G. Hammond) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—The notice which the secretary has just read convenes the statutory meeting of the company—a meeting at which you know there is no formal business to be transacted, no accounts to be presented, and no votes to be taken, and the only thing that it does is to give us an opportunity of meeting together for the first time, and telling you the position of the company up to date. I am not able to-day to give you as full a statement as I could wish, because, unfortunately, we have not yet succeeded in obtaining a transfer of the property, but I make haste to say that the delay in the completion of the formal transfer of the property has not been caused in any way by neglect or any want of *bona fides* on the part of those responsible for the same, but has been a purely mechanical delay caused by the difficulties of time and space—difficulties which even we, with all our modern appliances of railway and telegraph, have not been able to completely overcome. In the first place, the company telegraphed to the bank in West Australia the funds necessary to secure the purchase, and the transfer was presented to the bank in due course, but they acting on your behalf, and under the advice of their solicitors, found that the signature of a certain gentleman was not attached to the transfer which they thought it absolutely necessary should be attached. The transfer was signed on his behalf by his manager, but the view of the bank was that this was not sufficient. The gentleman had by this time left the colony and was in England, but as we fortunately had his address we communicated with him. He was much distressed at what had happened as he had no idea before he left the colony that it would be requisite for him to sign the transfer personally, but he immediately took the promptest steps to make good the deficiency which, however, you will understand in spite of all his efforts took some considerable time, but I am now glad to be in a position to tell you that, judging from a telegram received yesterday from the bank in three or four days the actual transfer will, no doubt, have taken place. In spite, however, of this delay in taking over your property your interests have not been prejudiced in any way, for active mining operations have been carried on by the vendor, and a very favourable discovery has been made of another reef traversing your property from end to end, and there is every prospect that it will prove permanent. This reef is of so much importance that, had it been discovered a few weeks sooner, the price you would have had to pay would, undoubtedly, have been much higher than you are now paying. So far, then, it is good to know that no harm has come by this delay in the past, and now for the future. Your managers have secured the services of Mr. W. Vivian, who is a well-known mining engineer and expert, to go out to Coolgardie and take charge of this and other mines in the district controlled by the managers in London. Mr. Vivian has already sailed, and is on his way, and we, therefore, hope in about six or seven weeks to have telegraphic communications from him. Mr. Vivian comes from an old mining stock; he was born on a mine, as were six generations of his progenitors before him. At the age of 23 he had charge of an important property, and he has since had experience in America, Canada, Spain, and Australia, and has lately returned from the charge of a group of four mines in the Etheridge district. His testimonials are of the highest character, and we are now certain that the information we receive will be in all respects absolutely reliable. As to the question of machinery—it has now been ascertained beyond doubt that in the Coolgardie district machinery which is suitable for one property may be quite unadapted for another property close by, and having this in view your directors have not actually ordered any machinery, but are waiting to hear from Mr. Vivian on the spot as to what will be the best to send out, so that we shall know for certain what the real facts of the case are. In the meantime, the time has not been wasted, for your directors have obtained full drawings, plans, and specifications of all the different machines which are being sent out to Australia, such as Krom rolls, oil engines, boilers of various patterns, constructed with a view of preventing deposit, and being easily cleansed, as well as the condensers for steam engines, gravitation stamps, and I am glad to tell you that in this they have had the personal assistance of Mr. Vivian, who has been at work in London with your managers, and has inspected personally most of the different kinds of apparatus, and, therefore, goes out fully primed regarding all the requirements of the case, and having in view the importance of buying really suitable machinery, the board think the delay well accounted for. Your property is such that the directors have no doubt whatever of its value. To recapitulate, the services of a well-known expert have been engaged to open it out; the machinery, when ordered, will be the most suitable that can be devised for what is wanted, and the working capital remains untouched. The work of the past four months has been performed efficaciously, and free of cost to the company; and, taking all things into consideration, your position and property are of a highly favourable nature. There is one more feature connected with this company which is unique, I should imagine, in the history of what may be called the smaller Westralian companies—and this is, that your directors are, and were, so satisfied with the value of this property that they themselves applied for on the terms of the prospectus, and were allotted over £15,000 worth of shares; and you, therefore, have the strongest guarantee of their interest in the property. In conclusion, we have with us here to-day Mr. Webb, the vendor, who has been with us from the beginning, and has always rendered us every assistance in his power in everything we have been called upon to do, and I am most happy to be able to call upon him to say a few words to you as to what he knows concerning the property, and what has been done there, and after that I shall be pleased to answer any questions you may desire to ask. I now call upon Mr. Webb to address you.

Mr. WEBB said: Mr. Chairman and Gentlemen—After the extensive remarks made by our Chairman, I really think there is little for me to say. I may tell you that I have been connected with this property from its inception. It was the first property formed into a syndicate in Western Australia, and the shares which were £10 each were so much thought of, that before the first meeting was held they were selling at £1 premium, and at one time rose as high as to £40 per £10 share. The shareholders are still very pleased with the property, and, as the Chairman stated just now, had the new reef been found a little sooner the property would never have been placed on the market at so low a price. I have been connected with it ever since the first pick was put into the ground, and it has been improving ever since. Several shafts and drives have been made, and the property is now all ready for the machinery, and I may safely say it only requires machinery to place it on the dividend-paying list of the Western Australian Gold Mines. Of course, the public in England at the present time do not seem to grasp the idea of Western Australia being a gold-producing country, but the time will come when Western Australia will be as much in favour as South Africa has been during the last few months; but, of course, I can understand that people are waiting for returns. This is the second property I have placed on the market (being interested, as some of you know, in the Big Blow), and I have every confidence in placing it before the English public, and also every confidence in its turning out a dividend-paying concern. I do not wish to make any rash statements as to the ore at grass, but I think your mine will prove a fair producing ore of (say) 2 ounces to the ton, which will be very satisfactory, and I happen to know of a wager of £100 made in Perth by the manager some 12 months ago that he could produce tons of ore from the mine that would yield 20 ounces per ton. I have every confidence in recommending this mine, gentlemen. I do not wish to speak in any boastful spirit, but when I came to England I was instructed that I had a good name to sustain, and to sustain it, and I have specially refrained from seeking to be, or being, in any way connected with any property with which I was not thoroughly conversant. I do not know anything else I can say (and I shall be pleased to answer any question concerning the mine) except that I am one of the largest shareholders, and the manager is also one of the largest shareholders, in the mine, and neither he nor I have sold a single share from the start.

The CHAIRMAN: I forgot in my speech to mention that the delay in sending out the machinery is compensated for in another way, and that is, during the last few months the cartage rates have been, and are being, greatly reduced, for whereas a few months ago the rate was £30 per ton it is now only £18, and as the railway progresses, so no doubt this will still further come down, so that the delay of a few months will probably be made up to you in that way.

A vote of thanks to the Chairman was then passed, and the proceedings closed.

(COMMUNICATED.)

MOORE'S RHODESIA CONCESSION.

Company's territory extended by 200,000 acres in Mashonaland.

The first ordinary general (statutory) meeting of the shareholders of Moore's Rhodesia Concession (Limited), was held on Wednesday, at the Cannon-street Hotel, under the presidency of Mr. LEIGH HOSKYNS.

The SECRETARY (Mr. A. J. May) read the notice convening the meeting.

The CHAIRMAN said: Gentleman—As this is only the statutory meeting, I shall not have many words to say to you; but there are some points which, perhaps, will interest you, and which I will mention. I have to regret the absence of Mr. Tarbutt, the Chairman of the company. He has been to Africa on business, and is now on his return home; and still further, we have all to regret the very sudden death of one of our directors, Mr. Albert Deacon. (Hear, hear.) Gentlemen, this company was registered on the 16th of January in this year, and the shares were allotted on the 21st. I may mention that the applications were so very numerous that we were able to allot 99,357 shares, giving a working capital, as I will point out to you later on, of £50,000, which, I think, is very satisfactory indeed. (Applause.) Out of this amount the vendors get £100,000, £50,000 in cash and 50,000 in shares. It was thought by the directors that it would be better to spread the shares over a large number of shareholders instead of having the shares in one block in the possession of the vendors, so we decided to give them half-and-half. I think you will agree with us, as the shares now stand at a small premium, that we did wisely and well. I am sorry to say that there has been considerable delay, owing to no fault of ours, in getting the papers ready for the actual transfer of the property from Mr. Moore and the Clay Syndicate, to whom Mr. Moore sold, to ourselves; but at last I am glad to say all difficulties—I do not think there were any real difficulties at all—have been removed, and now everything is in order. The Chartered Company have ratified the transfer documents, and they are now on their way to Salisbury for the purpose of the transfer. There is no difficulty, therefore, at all in the way of the transfer of the property. I can tell you that on the 24th of this month the scrip will be ready for issue, and the final instalment of 5s. per share will be called up in the course of the week. I daresay some of you would like to know what we have done so far. Of course, we have not had time to do much, but we have done this; we have appointed first of all a very intelligent and estimable gentleman, of the name of Mr. Montague Groves, to go out there and act as our manager on the spot, and to send a report home as soon as ever he has satisfied himself as to the condition of the property and reefs which are detailed in the prospectus, and then we shall know what course we are to pursue. He went out with Mr. Tarbutt, who is going to travel with him as far as Johannesburg. I have not heard anything either from Mr. Tarbutt or Mr. Groves as to where they are or what they have done, but, at any rate, I can tell you that I know personally that Mr. Groves did very good work for a company in which I was concerned as a director. I refer to the Mashonaland Central, and during a very difficult time—the Mashonaland war. Mr. Tarbutt knows him personally, and, therefore, I think, we have a good man to work for us there. Now, I have got a little plum for you. When Mr. Rhodes and Dr. Jameson, both of whom I know very well personally, were in England, I thought I would ask the former whether, in consideration of the fact that we were going to spend in the country what I stated then would be £25,000 of working capital, he would give us a grant of land in Matabeleland or Mashonaland. He, without much hesitation, said he should be very pleased to do so on a purely business footing. "Well," he asked, "will 100,000 acres do for you?" I said, "No; you may as well give us 200,000 acres if you are going to give us anything"—(laughter)—and eventually, in the presence of Dr. Jameson, he agreed to do so on certain conditions, which were set forth afterwards in correspondence between ourselves and the Chartered Company. I may tell you shortly, then, that, although there was a small dispute between ourselves and the Chartered Company as to how much or what moneys we had to spend on this property, it was eventually satisfactorily settled, that, on condition that we guaranteed to spend, or spend within two years, £10,000 out of our working capital on 200,000 square acres, to be selected by ourselves, subject to the veto of the Chartered Company supposing our selection is not quite in accordance with their views—we can peg out and select ourselves in not more than three blocks this rather large and handsome gift to us, as I may call it. (Applause.) That, gentlemen, was not before you in the prospectus when you subscribed for your shares, and, therefore, it is something over and above what you applied for. (Applause.) I may as well read you the letter which we received from the Chartered Company, confirming the agreement with myself. It is a letter dated February 13, signed by the secretary of the Chartered Company to the directors of this company:—"Dear Sirs,—With reference to your letter of the 25th ult., we have seen Dr. Jameson, and my directors are prepared to grant you (subject to such land regulations of the company as may, for the time being, be in force in Mashonaland, and to its mines and minerals ordinance of 1895), the right to locate 200,000 acres of land in Mashonaland, the selection to be approved by the Administrator, and the demarcation to be made out in not more than three blocks. Should your company wish to mark out its grant in more than three blocks, it must obtain the special approval of the Administrator. Townships can only be laid out by, or under, the sanction of the company, and the land requisite for this purpose would be resumed by the company as land required for a public purpose." Then follow the conditions, but as that was subsequently modified, I will read you a letter of May 2, which sets out the condition ultimately arrived at:—"With reference to your letter of the 26th ult., because of the circumstances you mention, my directors withdraw the requirement made in my letter of February 13, and at least £10,000, in addition to the £50,000 capital already subscribed to your company, was to have been expended on the cultivation and development of the proposed grant, and will be glad to receive from your company a guarantee that the £10,000 is to be set aside out of the £50,000 for the proper development of the grant, and expended within two years." In a further letter we are informed that we can make use of this correspondence as we like at this meeting. Well, gentlemen, I really do not know that I have anything more to tell you, but I hope what I have told you has been satisfactory. (Applause.)

Mr. MORTIMER in referring to the balance of shares remaining to be allotted—namely, 643, asked whether they were to be issued at a premium, or whether they were available for the shareholders to take up.

The CHAIRMAN replied that this was a question which the directors had not at present discussed. In answer to another SHAREHOLDER, he said the 200,000 acres obtained from the Chartered Company had nothing to do with the area of Moore's Concession, to which, solely, the prospectus referred,

Sir FREDERICK YOUNG said he thought it was an admirable thing that the directors had been able to arrange for the company to have the 200,000 acres grant, and the shareholders must feel very much indebted to the board for obtaining such a concession. (Hear, hear.) He would take that opportunity of moving that the best thanks of the shareholders be given to the Chairman and directors for what they had done in connection with the company. This, he considered, promised to be a very great company indeed, and that the shareholders were especially indebted to Mr. Hoskyns, without whose assistance they would never have got the grant of 200,000 acres. (Hear, hear.)

Mr. ARTHUR TOOTH seconded the motion, which was carried unanimously, and after a brief acknowledgment from the CHAIRMAN, the proceedings terminated.

TAYLOR'S MATABELELAND GOLD FIELDS, LIMITED.

A valuable property.—Good assays.

The statutory general meeting of the shareholders of Taylor's Matabeleland Gold Fields (Limited) took place on Thursday, at Winchester House, Old Broad-street, Lieutenant-Colonel F. G. SHAW (the Chairman) presiding.

The SECRETARY (Mr. A. Freer Bargate) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—We have a small attendance, but I suppose it is recognised that this is only a statutory meeting, and we have little or no business to transact or lay before you, which accounts for the absence of shareholders. This meeting is convened in accordance with the Act of Parliament, which directs our first general meeting to be held as nearly as possible four months after registration. Your directors have nothing to place before you in the way of accounts and reports, it being simply a formal meeting. However, I have much pleasure in telling you that we have received a telegram from our managing director, who had arrived on the field, and I will read it to you. It runs as follows:—"Have arrived; everything favourable; consider company has most brilliant prospects; have secured further rights." This telegram is dated April 1, and we would have expected that confirmatory letters would have reached us by this time, but we are not yet in possession of them. We are glad, however, to learn that he has acquired further rights, and we know very well that whatever further rights he may have secured, they will be of good value to us. The claims that we already possess—namely, 140, I had better, perhaps, read to you. They comprise 10 claims on the Comet, 10 claims on the Niger, 10 claims on the Hotchkiss, 20 claims on the Nordenfelt, 10 claims on the Minnie, 20 claims on the Magnum Bonum, 10 claims on the Euphrates, 10 claims on the Metford, 10 claims on the Battery, and 10 claims on the Gardner. I venture to say that these, from their situation, are about as valuable a property as there is in Charterland, and as fine a set of claims as could be got by any company. They are situated in the celebrated Gwelo country. Those who have followed gold mining reports will know, of course, that the Gwelo country is now in the ascendant. Not only are we situated in the Gwelo country, but our property commences, part of it, within 4½ or 5 miles of Gwelo itself, and this should make our claims valuable in the eyes of the public hereafter. Gwelo is said to be one of the finest gold fields in Charterland, and I have no doubt that we shall see further reports later on, and at no very distant time, when these fields are more developed, and our property then, as I said just now, will be in the ascendant. Samples of quartz have been taken from the reefs, and I will read to you their assays. Personally I do not attach much importance to assays. I have been connected with gold mining for a number of years, having been one of the original concessionaires of the Mysore Gold Mines, which proved such a success. I do not attach very much importance, as I said, to assays, but I will read them to you. They sound very well, and if they only turn out half or even one quarter as good, it would make our property sufficiently valuable to induce speculators to come to us. The Comet assayed 8 ounces, the Niger 12 ounces, the Hotchkiss 9 ounces, the Nordenfeldt 11 ounces, the Express 4 ounces, the Minnie 8 ounces, the Metford 10 ounces, the Battery 2 ounces, and the Gardner 10 ounces to the ton. We have also the rights to locate 140 more claims, together with 28 alluvial claims, making in all 308 claims. In the telegram we received from our managing director, he does not tell us how many claims he has acquired, but what he has secured is in addition to those already acquired, and we have sufficient confidence in Mr. Taylor as a most energetic, painstaking, and hard-working man, to be sure that he has got us good value for our money. Of course, we do not know where these claims are located, whether they are contiguous to, or in continuity with those we already possess, but this we know, that anything selected by Mr. Taylor will be of first-class quality. You will understand, of course, that we are essentially a development company, and not a spending company. Our expenses are limited, and we can afford to bide our time until purchasers come. As a matter of fact, we have had some offers before us, which we have considered, but we do not think them good enough, and, in the meantime, we are not over anxious to negotiate just yet to sell any of our property, for the simple reason that it is being developed, and every development that is made and good report that is received will, of course, add to the value of the property. This we are now awaiting, and we promise you that when any further information comes from Mr. Taylor, it will be circulated to every shareholder. I have only one more word to say, and that is with reference to the ability of our manager, which I have already dilated upon. He is really a first-class man, and indeed, we could not have secured, if we had scoured the whole of Europe, a better manager than Mr Taylor. He has the entire confidence of the directors, and we are perfectly satisfied that everything he has done, or will do, for us will be to our great advantage. If any gentleman has any questions to ask, the directors will be very happy to answer them. (Applause.)

Mr. GRAY: I had only one question to ask you, Mr. Chairman, and which you have already answered. I am well aware that, with a property of this sort, there has not been time to do much yet in the way of development, but there is no doubt in the world that we have a valuable property. In Mr. Taylor, too, we have not only, as you say, a very capable, but a very energetic man, and, no doubt, before long we shall be receiving reports from him. Some other companies in which I am—I will not say an unfortunate shareholder, but still a shareholder—do not keep us informed from time to time as reports are received; and I do ask you—although you have already answered it—whether we can feel assured that we, as shareholders, will receive reports from you as they come to hand.

The CHAIRMAN: You may rest fully assured that every shareholder will receive the reports as soon as they can be printed and circulated. I quite agree with you that it is wrong to keep the shareholders in ignorance, and allow anything that is to be made, to be made by outsiders.

Mr. GRAY: I suppose we are all business men, and time is rather valuable in the middle of the day. As there is nothing more to be

one. I shall have very much pleasure in proposing a vote of thanks to our Chairman, and hoping that at the next meeting he may have something very satisfactory to say to all of us. (Applause.)

Mr. COSSON seconded the motion, which was very heartily received.

The meeting then separated.

ALPHA (RAND) SYNDICATE.

The policy of the board indicated.—An interim dividend expected.

The statutory meeting of the Alpha (Rand) Syndicate (Limited) was held on Monday, at the registered office of the company, No. 15, George-street, Mansion House, E.C., Mr. E. WALMSLEY presiding.

The CHAIRMAN said: Gentlemen—This meeting, as you are aware, is called under the statute which obliges us to hold our first ordinary general meeting within four months from the date of the incorporation of the company. Generally speaking, there can be very little business requiring shareholders to come together at so early a period; but in the present instance I think I may have something to say which will interest you. Since we went to allotment, which, I may here say, was a very successful one, there having been applications very largely in excess of the shares offered for subscription, we have entered into many negotiations for the acquisition of properties. In the exercise of our discretion and judgment many offers have been rejected, as, perhaps, not promising all we could have desired, whilst others have been entertained and ultimately accepted. These latter properties, we believe, will return a more than satisfactory profit when we come to their public issue. You will, of course, bear in mind that this is a company formed for the purpose of issuing other companies, or for taking part in such issues. To speak of the transactions actually entered into, we have obtained the option of a property in the Luipaard's Vlei district upon such terms as will secure, we expect, a very liberal profit without great, if any, attendant risk. We had originally taken up this property, and registered a company, with a view of bringing it out ourselves; but some proposals were afterwards submitted to us, whereby we could get relieved of much, and ultimately of all, of the risk of flotation. The first proposals were that we should sell our contract, and take an interest in the purchasing company; but it was afterwards arranged that we should accept a sum in cash in addition to the repayment of all expenses incurred by us, and we decided to accept these terms. A substantial deposit has been paid, and we have no fear of the transaction not being duly carried out. We considered it better to secure a certain, although smaller, return rather than incur all the risks and responsibilities, with a higher, but more uncertain profit which it might have yielded us. A second property has been secured on another part of the Rand, on the Deep Levels. In respect to this venture, we do not stand in quite the same position. To guard against our entering into too heavy obligations under any one head, we have accepted one-third interest only in the flotation of this property, and one-third of the attendant risk and expense will fall upon us. These two properties comprise the principal business undertaken. We have other interests, more or less defined, in other directions, of which it might be somewhat premature to speak at present, but we consider the properties to which I have made reference very promising ventures, and such as will yield a good return. They are both in a forward state of preparation, and within the next few weeks their public issue should be made. We hope to secure to our own shareholders the first opportunity of subscribing for one-third of the capital of the Deep Level Company, and as, no doubt, this opportunity will be welcomed, we should desire that the Deep Level Company may receive as much support as possible from our own shareholders. We have several other properties under our consideration besides those to which I have referred. We shall not, however, commit the company too deeply, but rather await the results of the present business in hand than spread ourselves, and thereby come under numerous and heavy obligations at any one time. So far, we think there are good reasons for congratulating you upon the position and prospects of the company. It is not often that at so early a stage of a company's career the directors can so confidently foreshadow so good a result as the outcome of the business already entered upon is likely to be. We can only hope, as we expect, that at the conclusion of our financial year, you may realise the result of our efforts in a substantial return upon your investment. I do not think there is any more to say; but if any gentleman would desire to have any further information I shall be glad to reply to any questions which you may be disposed to ask.

The CHAIRMAN, replying to the questions, said that in all probability a substantial interim dividend would very shortly be declared, and that the financial year would terminate on December 31. The directors hoped to meet the shareholders again, probably in March of the ensuing year.

A vote of thanks to the Chairman and directors terminated the proceedings.

THE GREAT FINGALL REEFS, LIMITED.

A favourable outlook.—Good facilities for working.

The first ordinary statutory general meeting of this company was held at Broad-street House, London, E.C., on Monday last, Mr. F. A. THOMPSON presiding.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—As you are aware, we are called together to-day in obedience to the law, under which we as a company exist, and which requires us to convene a shareholders' meeting within four months of the registration of the company. Your directors, therefore, take this opportunity of placing before you the latest, and, in fact, all the information they have regarding the property, and the progress made with the development work since its control was placed in the hands of the board. The property is situate at an altitude of about 1000 feet, about 350 miles north-east of Coolgardie, and comprises 11 successive and contiguous mining leases of 24 acres each, or a block of 264 acres, so located on the strike of the reefs as to give us 10,890 feet, or rather more than two miles in length, upon the line of reef. From present appearances there would seem to be but very little, if any, doubt of the existence of a sufficient quantity of water upon the property in depth to meet the ordinary requirements, as at the shallow depth of 105 feet from the surface the influx of water is too great to admit of the further sinking of the shaft until the arrival of pumping machinery. Should this not prove to be sufficient there is a large lake in close proximity, so that an abundant supply will be obtainable from that source. In a recent communication from the manager in charge, he states that the five reefs on this property maintain their regularity of strike and dip, and that it is more than probable that there are more than five parallel reefs within the boundaries of the property. Your directors have secured the services of Mr. Mackinnon as manager, who comes to us thoroughly well recommended, and who it is believed will do good work for you. While the veins cannot be said to outcrop continuously through the property, yet the outcrop is found and clearly traceable through the entire length of the property. The workings thus far have been largely confined to the three central leases, and consist of shafts, two of which are down to the 100 feet level, and several hundred feet of drives at this level. A sample of 40 lbs. weight of ore taken from shaft No. 3 at different points from the surface to the bottom, gave a result of 3 ounces 15 dwts. per ton. In No. 4 shaft, which was down 50 feet at date of report, the reef gave excellent results all through from surface to the bottom. Our manager reports to us that we have already sufficient payable ore in sight to keep a 20 head battery going for 10 years. A cablegram from Coolgardie, April 19th, 1895, states:—"Labour principally confined to the three centre leases, the gold occurs in the stone on the whole workings varying from one to three ounces per ton." A telegram received from the mine April 30 stated:—"All driving faces show gold 1 to 3 ounces." While a cablegram received from Coolgardie, May 11, or Saturday last, containing a synopsis of the manager's fortnightly report up to April 20, states:—"Level north from shaft No. 1 at the 100 feet level has been driven 70 feet north, average width of lode is 3 feet 6 inches, showing free gold. On the same level 100 feet have been driven south, reef usual size and value. East parallel reef 30 dwts. per ton. At the 50 feet level from shaft No. 5 level has been driven 60 feet north. Reef the whole width of the drive 25 dwts. per ton. The board has purchased a complete set of hauling and pumping machinery and a 30 head stamp mill in Melbourne, with sufficient engine and boiler power for 60 stamps, which is thought to be complete in every particular, and the same is now on its way to Southern Cross for shipment from there to the mines, and every effort possible is being put forward to expedite its arrival at the mines at the earliest possible moment, as well as to hasten its erection on arrival. In the meantime good, substantial, and permanent development work is being carried on, and large bodies of payable stone are being developed ready for extraction and treatment, when the mill is ready. In conclusion, I can only say that the property seems, on development, to bear out every statement made as to its value, at, or prior to its being acquired by this company, and gives great promise of future success, and I can assure you of the earnest and untiring efforts of your directors to place it upon the dividend-paying list at the earliest possible moment, consistent with keeping it there when once it assumes that position.

There being no questions, the proceedings terminated.

(Communicated.)

ENGLISH AND AUSTRALIAN COPPER COMPANY, LIMITED.

Trade improving in Australia.—The recent rise in copper values.

An ordinary general meeting of the shareholders in the English and Australian Copper Company (Limited) was held on Wednesday, at the offices, Palmerston Buildings, the chair being occupied by Mr. J. HARVEY.

The SECRETARY (Mr. W. R. Caldwell Moore) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—Admitting that no report submitted to shareholders can be entirely satisfactory unless it provides for a dividend—(hear, hear)—I cannot help thinking that when we take into consideration the condition of business during the year 1894, now under review, we may to some extent congratulate ourselves on the fact that our accounts are no worse than they are. That is, perhaps, not much of a consolation, but if you look into the accounts you will find that, after paying the £1800 as interest on the debentures, there is a loss of £1232, showing that we made something like £600 towards the interest. We had to face the heavy fall in silver from 2s. 7¾d. to 2s. 3¾d., and on that fall we had to realise a considerable quantity of matte, which we could not smelt economically or profitably on the other side. The loss on two shipments over here amounted to something over £2000. During the year, in fact, we have seen silver certainly lower than ever before, and probably as low as ever it will be again, especially considering what has been taking place in the East, and the probable chances of silver becoming more and more valuable. That, however, is a bimetallic question into which I need not enter. Again, I may mention that, acting on the wishes of shareholders, we wound up our silver smelting business—that is to say, we got rid of all our stocks of every description, and we have simply the plant left. Generally, in cases of liquidation, no matter what they are, losses are incurred; but I think we have got out of this pretty well, and if it had not been for the interest on the debentures over here we should have been left with a profit. We say in page 6 of the report that we have been trying to let some of the smelting works at Port Adelaide for silver smelting. So far, we have not succeeded, but the matter is kept before us, and if any offers are made we shall be quite prepared to entertain them; but business there has been very bad, and there is no inducement to enter into any speculations of any kind. As regards copper, there is the same story as I have had to tell you for the last two or three years, for owing to the very low price of the refined metal, mines have not been working, and, therfore, supplies have been very limited. Our copper plant is in perfect order at Newcastle, and we are prepared to deal with all supplies brought forward. In regard to the wharf we have entered into an agreement with the wharf combination on much more favourable terms than we obtained on the last occasion when we separated from them, and worked for a time upon our own account. You will see that the profit from that is something like £2300 for the year, and if business improves we shall, of course, largely benefit, because we receive a certain percentage on the whole of the wharfage received under the combination. I have no doubt that many of the shareholders are considerably disappointed at a call being made upon their shares. Unfortunately we had no option. The bank we did business with in the East, insisted—why I do not know, for they were amply covered by the stocks we had there—upon having additional securities. They wanted the directors to become personally responsible, and to have the call hypothecated, so that the only thing we could do was to make the call, which, with the exception of a few shares which were forfeited, has been paid in full. Gentlemen, I am afraid that about completes my story with this exception—that we have reduced our expenses to as low a limit as is possible consistent with carrying on the wharf at Port Adelaide, and also our smelting works at Newcastle. Economy has been our ruling motive. One advantage of our having had the call is that we have not had any overdraft for some time in Port Adelaide, nor are we likely to have one again except under very exceptional circumstances. We are really looking to see whether we cannot liquidate the company by sales of any of its property, or taking advantage of any offers that may be made. Liquidation would not, I think, bring with it any advantage; in fact, I think it would occasion the loss of a great deal of our income at the present moment. The Chairman concluded by moving the adoption of the report and accounts.

Mr. W. O. ROBINSON seconded the motion. He might perhaps obviate some discussion and so save time if he were to say that the amounts standing in the accounts to the items of "sundry creditors" and "sundry debtors" had all been cleared off; and that, apart from any moneys on the other side, they had £8000 or £9000 in hand, so that in the event of there being any revival in the copper mines the company would have ample moneys in hand, without being under any obligations to the bank, and paying 8 or 9 per cent. interest upon an overdraft. Should the present rise in the price of copper continue—as there seemed every reason to expect it would—it was highly probable that larger sums of ore would be forthcoming for treatment at Newcastle, in which case they would be in possession of the necessary working capital.

Mr. ROBINS thought that as during recent years there had been no prospect of the company being able to engage in operations sufficiently remunerative to make it worth while their going on, it would be better for them to go into liquidation immediately.

The CHAIRMAN said that the company could not go into immediate liquidation, because they could find no one willing to buy their properties. Repeated attempts had been made to dispose of a portion of the company's assets, but without avail. The assets of the company were put down at £134,000, and the debentures amounted to £35,000.

Mr. WILLIAM WRIGHT, who said he had recently returned from Australia, with which country he was very familiar, thought the shareholders could not do better than fall in with the Chairman's policy of gradual liquidation. Property in Australia at the present time was in a very bad way, and the company in proceeding to immediate liquidation could hardly fail to lose heavily. Smelting companies were not wanted in Australia at the present time, where the copper mines were raising very little ore.

The CHAIRMAN remarked that the company had some property at Port Augusta which might become valuable when the railways now projected were completed.

Mr. J. B. CALDECOTT reminded the meeting that the debentures would become due in a year or two, and alluded to the necessity of providing the money required to meet them. He thought the smelting of the company could be very well performed at one set of works.

Mr. FREISE had watched the company's career with a great deal of interest for many years, and while he agreed with a good deal that had been said in the course of the discussion, he was inclined to believe that shareholders had forgotten that the last two years had been years of phenomenal depression in Australia. A period when 13 banks out of 16 in the colony suspended payment might surely be regarded as phenomenal. The colony, however, seemed to have got through its difficulties marvellously quickly and well. Nothing affected Australia so much as the price of wool, and this had risen considerably during the last few months, as well as the price of copper. It should be remembered that the company had no liabilities, and he believed the directors had spoken wisely in advising them to hold their own, and not act in a violent hurry. Should copper continue to rise he would not be at all surprised to find the company carrying on a snug little business at one of their smelting works. In regard to the silver business the directors had evidently done their best, notwithstanding the perpetual fluctuation in the value of the metal. As to their wharf they should remember that it had realised a profit, notwithstanding the unparalleled depression, and be very chary of parting with it.

The motion for the adoption of the report and accounts was then put, and carried unanimously.

The retiring directors, Mr. John Harvey and Mr. W. S. Cuff, were unanimously re-elected, and the first part of the proceedings terminated.

Subsequently an extraordinary general meeting was held for the purpose of considering proposals to empower the directors to purchase the company's debentures, and to invest the available funds of the company. After a brief discussion the matters were adjourned for future consideration.

COOK'S KITCHEN.

Loss of £1221.

A four months meeting of Cook's Kitchen shareholders was held on the mine on Friday, May 10.—Mr. WALTER PIKE, J.P. (purser), presided.

The accounts showed—Labour cost, £2537; merchants' bills, £1509; water rents, £25; Illogan parish rates, £50; income tax, £6; total, £4127. The credits were 73 tons 16 cwts. 1 qr. 25 lbs. of black tin sold for £2281; discount on merchants' bills, £7; Tincroft adventurers (deep adit account), £7; leaving a loss of £1221 on 16 weeks' working, and a balance of £1328 against the adventurers.

The executive had kept their promise, made at the last meeting, by returning about 16 tons of tin more and reducing the cost £450.

The report, signed by Captains Josiah Thomas, R. Arthur Thomas, Charles Thomas, and Thomas Uren, was as follows:—

> The engine shaft is sunk 10 fathoms below the 420. The lode in shaft is still of a promising character and yields about 22 lbs of tin to the ton. 430 end east driven 18 fathoms from shaft. Lode somewhat improved since last meeting. The last parcel yielded 33 lbs. to the ton. Since last meeting they have stoped near the 420 end east at point then reported on. The average produce of the stopes has been 50 lbs. tin to the ton. From the work accomplished they judge that a very productive lode exists here in bottom of 420 level. They have taken down the ground near the 420 end east. The lode will yield, for 12 feet wide, 35 lbs. of tin to the ton. This end is only 35 fathoms short of the tin ground in the eastern part of the mine. Lode in 406 east worth £25 per fathom. Lode in 394 east and stope below that level worth for 12 feet wide £30 a fathom.

The average price of tin sold was nearly £40 a ton.

The CHAIRMAN said an extra month's bills was charged, and the loss was much smaller than the £2356 last time. They all regretted the absence of the manager, who is acting on medical advice.

Captain ARTHUR THOMAS said six weeks ago he was below with Captain Charles and Captain Hosking, and he was surprised at the character of the lode in the 394 and the stope, worthy of a vigorous trial. Since then he had paid another visit, and the character had been maintained, and in one case improved.

Captain CHARLES THOMAS said the 420 end is 70 fathoms from the eastern boundary. In six months all that ground can be opened for stoping.

A call of 7s. 6d. a share was made.

WEST SETON.

Calls unpaid.

A meeting of West Seton shareholders was held at Tyack's Hotel, Camborne, on Tuesday.—Mr. THOMAS PRYOR (purser) presided.

At the last meeting there was a balance of £328 in favour of the shareholders, provided all arrears of calls are paid. During the last two and a-half years interest and commission to the Consolidated Bank, to the amount of £92 has been accumulated; and £52 for printing, commission, taking-up pitwork, &c. The total payments since last meeting were £147, and the accounts now showed a balance of £181 in favour of the adventurers, supposing about £832 arrears of calls are paid. Last time the arrears were only about £770, as it was considered the remaining amount would be paid at once by a Gwennap farmer, who, however, was unable to meet his acceptance. Only a few pounds' worth of calls have been paid since last time. The amount owing to the bank is £639, and the charges on that amount to about £25 a year.

The PURSER still considered the bulk of the arrears good, but even if all proved worthless there were 4000 good shares and a call of 2s. or 2s. 6d. a share at most would defray the total liability. Mr. Pryor had charged nothing for his services towards winding-up the mine. The calls were in the hands of Messrs. Paige and Grylls, who have endeavoured to collect them, but it was a very difficult matter. One shareholder, owing £222, is a mine-manager in Africa, getting £400 or £500 a year, and he is expected home at Redruth shortly. His last payment was £40 in 1891. Mr. Pryor knows a Penzance firm with whom this man does business, and is sure the money will be paid if he returns to Cornwall. The estate of a former manager of West Seton, which owes £109 10s., has no assets, and this must be looked upon as a bad debt. The widow is now a housekeeper getting a small salary. A London barrister is likely to pay 10s. in the £ on £36 owed by his sister, whose whereabouts in a foreign country the purser is unable to discover, so a compromise will be effected. A former forester at Tehidy, now in Ireland, owes £20, and it was thought he could pay. A Camborne man, owing £71, was said to own two Dolcoath shares, and to be able to pay up. An old gentleman at Newbury, Berks, who owes £30, lost a large sum in Cornish mines, and is now living with a daughter. A Pengegon man owes £40. A Gwennap farmer will pay off his debt of £80 by degrees. In some other cases promises have been made, and the purser expects to get in about £100 in a month. They must remember that in West Seton they have called up enormous sums. He suggested the formation of a small committee, with power to press people or compromise with them; and as it was felt they ought to meet oftener than in the past, the next meeting was fixed for the first Tuesday in August.

The committee appointed were Messrs A. W. Nix, J. M. Holman, John Mayne, and W. Viall.

LEADHILLS SILVER-LEAD MINING AND SMELTING COMPANY, LIMITED.

Satisfactory management.—The rise in lead.

The thirty-sixth ordinary meeting of the members of the Leadhills Silver-Lead Mining and Smelting Company (Limited) was held at the offices of the company, 30, Finsbury-circus, on Thursday.—Mr. PETER WATSON, J.P., C.C., occupied the chair.

The SECRETARY (Mr. Felix F. Wilson) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is only the half-yearly meeting of the company, and we do not submit to you a report as to the financial affairs of the company until October or September. When this company was formed we thought it advisable to hold half-yearly meetings in case any of the shareholders should require any particular information. There is nothing of a particular character that I have to say to you to-day, but before I submit a statement on behalf of my colleagues, it would be better to take the report of the resident manager, which the secretary will now read.

The SECRETARY then read Captain W. H. Paull's report as follows:—

Brown's vein.—The 160 fathom level has been extended 10 fathoms 0 feet 9 inches south of Jeffrey's shaft, and 18 fathoms 1 foot north of Wilson's shaft, where an accurate communication was effected and good ventilation secured for the bottom of the mine. The total distance driven at this level between the two above-named shafts is 123 fathoms 1 foot 9 inches, out of which some 22 fathoms 1 foot 3 inches in length only proved productive, where the vein was 5 feet wide, varying in produce from 10 cwts. to 25 cwts. of lead ore per fathom. The 160 fathom level north of Jeffrey's shaft has been further extended 47 fathoms 0 feet 6 inches on a vein varying from 3 to 5 feet wide, composed chiefly of stone and spar, which contained a little ore (in places) in the first 11½ fathoms, where it improved and yielded for 8 fathoms 4 feet 6 inches in length 30 cwts. of lead ore per fathom. From that point up to the forebreast a distance of 26 fathoms 5 feet, the vein has been very changeable, yielding, at times, 10 cwts. and 20 cwts. of ore per fathom for short distances, but most unproductive. The vein in the forebreast of this level is 4 feet wide, composed of a good mixture of kindly spar, stone, and a little lead ore, though not sufficient to value. Judging from what is seen in the level above, we should now shortly be opening out some good ore ground at this point. The same level (160) is extended south of Wilson's shaft 48 fathoms 4 feet 6 inches; the vein in the first 8 fathoms 1 foot of this drivage was unproductive, the next 14 fathoms 4 feet produced 16 cwts. of lead ore per fathom, and for the remaining 25 fathoms 5 feet 6 inches, up to the forebreast it was unproductive; but there may be more vein standing to the west, which will be proved by No. 2 winze south of Wilson's shaft, now down nearly 8 fathoms, and in course of sinking below the 145 fathom level, where the vein is 7 feet wide, producing 50 cwts. of lead ore per fathom. No. 1 winze below same level south of Wilson's shaft was started in a vein 4 feet wide, worth 35 cwts. of lead ore per fathom and communicated to the 160 fathom level, but the vein became unproductive some 9 feet below the 145 fathom level, and continued so to the 180. Nos. 3 and 4 stopes over the 145 fathom level north of Jeffrey's shaft are now producing 25 cwts. of lead ore per fathom. The 115 fathom level has been extended north of Jeffrey's shaft 17 fathoms 1 foot on a vein varying from 3 to 5 feet wide, which showed a little ore at times, but not in paying quantities, and the end is poor. The same level south of old stope above the 130 has been driven 14 fathoms 2 feet 6 inches on a strong sparry vein 4 to 6 feet wide, worth for the first 9 fathoms 3 feet 6 inches in length 25 to 30 cwts. of lead ore per fathom, but for the remainder of the drivage it has yielded scarcely any ore. There remains but a few feet to drive to communicate these two points, when the above run of ore ground will be available for stoping, and which is standing whole to within 6 fathoms of the 85 fathom level. The 100 fathom level has been driven 53½ fathoms south on vein, varying from 3 to 5 feet wide, of a very promising character at different points, but yielded no ore to value. This point is now extended 202 fathoms 2 feet 6 inches south of Wilson's shaft, vein in forebreast 4 feet wide, containing crystallised spar and stone of a good character for producing ore. I would recommend this level to be pushed on southwards in search of fresh deposits of ore where a discovery would be of great importance, as it is in virgin or whole ground to surface—a height of about 180 fathoms. A drift over the 100 fathom level south of Wilson's shaft has been driven 12 fathoms 5 feet on an eastern portion of the vein, which has yielded on an average 28 cwts. of lead ore per fathom, and a winze recently started is now being sunk thereon below said drift, which is yielding at present 30 cwts. of ore per fathom. The crosscut eastwards towards Raik vein at the 100 fathom level south of Wilson's shaft has been extended 36 fathoms 5 feet 6 inches, making a total distance of 55 fathoms 0 feet 9 inches from Brown's vein, and according to calculations should have reached Raik vein, but it is evident that said vein must have taken a more south easterly bearing, or underlies faster than where seen and worked upon some distance further north at Gripp's adit level. Of late we have intersected several small strings of spar, &c., in this crosscut, showing spots of ore, and the vein may be intersected any day, which I trust will be found productive. The channel of ground here I may say is most congenial for the production of mineral. The 85 has been driven 33 fathoms 4 feet 6 inches on vein averaging 4 feet wide, rather soft and unproductive for the whole distance. In present end the vein looks more promising, and contains a little spar. This level is advanced 167 fathoms 2 feet 3 inches south of Wilson's shaft, and when a communication is effected with a winze already sunk from the 70 fathom level a short distance in advance of this end a winze should soon afterwards be sunk to the 100 fathom level for ventilation, &c. We have other five stopes working over the different levels, where the vein varies from 4 to 5 feet wide, and which will produce on an average 40 cwts. of ore per fathom.—Barrowcole vein. Gripp's adit level has been extended 30 fathoms 1 foot southward on this vein which varied from 3 to 5 feet wide, composed of quartz barytes and stone, showing in places good stones of lead ore and copper ore and recently some small stones of blende have been broken there. The vein continues open, and is letting out a heavy stream of water, and the indications of meeting with a productive vein are favourable. This level is now driven 97 fathoms 5 feet 6 inches south of George's Roust vein. Several short crosscuts have been put out at the different levels and branches of the veins tried, but nothing of moment hitherto discovered. A great deal of exploratory work has of late been accomplished without much success, but I trust that within a short period we shall make some important discoveries by continuing the present drivages, &c., and the company be well remunerated for the outlay. The past winter has been a most severe one, very hindering, and did a considerable amount of damage to our walls, &c., at the smelting works, which have been repaired, and all things here are being pushed ahead as vigorously as possible. Strict attention is also paid to the keeping down of the costs as low as practicable in all departments.—May 13. I am just up from underground, and beg to say that there is no change of importance in any of the different points of operation since my report of the 9th inst. All surface works are being pushed forward with full speed.

The CHAIRMAN then said: Gentlemen—You have heard the report of the local resident manager, and I think it will show you that, notwithstanding the great depression in the price of lead, we are vigorously developing this mine in accordance with the agreement entered into with regard to the royalty question with Lord Hopetoun's adviser, Captain Thomas Hope, M.P. What we have been doing since that agreement was entered into has, I am sure, so far fulfilled our obligations in that respect, not, however, with any particularly successful result in the drivages. On the contrary, I may say that the mine has been comparatively poor in these several drivages, and this has made it exceedingly difficult for us to continue some of them. Still, there is an old saying: "Nothing venture, nothing have," and we have accordingly continued driving these levels. Of course, we do not know what we shall meet with. Any moment may bring a better result. At any rate, so far we have fulfilled our obligations, with this exception that we should have commenced at 163 fathoms a crosscut to intersect Brow vein, but we were so struck with the appearance of the 100 fathom level south of Wilson's shaft that we continued that another 40 fathoms, and having done so we have asked permission of Lord Hopetoun's advisers to put out a crosscut at the end of the drivage where we now are—viz., at a depth of 200 fathoms. They do not see their way clear to allow us to do that. We thought it would be much better if they would allow us, instead of crosscutting through hard rock, to continue the 100 fathoms south further to intersect the Brow vein. I have seen Captain Hope at the House of Commons, and had a long correspondence with him on the subject, and I have what I might almost say is his final answer in the matter; but I am to see him again on the subject, and I hope some arrangement will be come to by which they will yet allow us to continue that drivage, because I can see that under the circumstances it is only reasonable that we should be allowed to do so. I am quite satisfied that no practical man, knowing the position of affairs, would take any other view. However, when we come to have a further interview on the subject, I think that we may overcome the difficulty. If we do not, we shall have to fulfil the agreement and drive out the crosscut. A considerable cost and a considerable time would be saved by permitting us to drive the 100 fathoms south instead of crosscutting through the hard rock. Another point upon which we have made representations to Lord Hopetoun's advisers—and without going fully into details, I may mention the matter to those who are present, and, through the Press, to those who are absent—is an idea we have had for some time of working a portion of land outside our territory. We have asked Lord Hopetoun to give us terms upon which we may try this ground. I must ask you to-day to allow us to proceed with the negotiations for this permission, and to take advantage of it if we should be successful enough to obtain it. It will not be a very expensive matter—to begin with, at any rate; and we are in hopes that we may make some important discoveries. I am not at liberty to say anything more on the subject at present, but such is our intention; and you may be sure that we should not spend your money and our own unless we had good grounds for believing that we should meet with some discoveries for the benefit of ourselves and Lord Hopetoun, and for the good of Leadhills village as well. The idea was when we had a new lease and some portions of the lands were taken away from us, that other people would come and take licenses, and commence working at various parts of Leadhills. But we have gone on a number of years now, and no one has thought fit to take up a license to work any portion of the ground, and I conceive that the first people who should have a license to work in the surrounding lands are ourselves, considering what we have done for Leadhills during a period of 17 or 18 years. I hope that Lord Hopetoun will view it in that light when we represent the matter to him. You will all rejoice that Lord Hopetoun, after being away in Victoria for a period of five or six years, has returned with Lady Hopetoun to Scotland. He and his family have been attached to Leadhills for a large number of years. We shall hope, consequently, to have a personal interview with Lord Hopetoun, and we must ask you to trust to your directors in any negotiations they may have in regard to the development of the property, and also with regard to the lands adjoining. If so, I hope that some good results for us all may ensue. One point in the report I must refer to, and that is with regard to the severe winter through which we have passed. We are very pleased to see Mr. Hamilton here, and I think he can bear testimony to the severity of the winter, and our second agent, Mr. Aitcheson, who was born at Leadhills and is now between 60 and 70 years of age, never remembers such a long and serious winter as we have just had. I believe I am right in stating that some of the roads were 10 or 12 feet high with snow for weeks—months I was going to say. At any rate, it greatly interfered with our various operations, but since then we have made up in a great measure for the delay which has been occasioned. We are very pleased with our present manager. Of course, if the lead is not in the ground we cannot put it there; but, as I said before, "nothing venture, nothing have," and we have pushed on our various explorations in the hope of meeting with some discoveries. He believes that at no distant period we shall get some discoveries. I think so too. There is one point we are very near to now, and that is the Raik vein. Mr. Whitley knows the country very well. His brother-in-law was there for a number of years, and at that time, something like 17 or 18 years ago, when we bought the property, the Raik vein was enormously rich. We went down to a certain depth, and it became very poor. Now we have driven the crosscut—that was one of the agreements entered into with Lord Hopetoun—something between 50 and 60 fathoms, and we are now very near intersecting that lode. Of course, if we were to meet a lode anything approaching the value of the Raik vein in the upper levels it would be a very glorious thing for us, but if even we get a moderate lode of half that value it will be a great satisfaction to us. In the course of a few days or a few weeks we may hear of something good having been discovered; but if not, we have done our duty in driving the crosscut to intersect it. As I have already mentioned, the winter was a very severe one, and as to Mr. Aitcheson, I am very pleased to tell you that, after a severe illness, he is so far recovered and I hope he will be with us for a number of years. I do not think there is anything more I have to tell you, excepting as to the price of lead. When we met 12 months ago lead, to use an old expression, was "as flat as ditch-water," at £9 a ton, and if we had to sell our stock then I do not believe we could have disposed of it at £9, and I daresay we should have had to sell the whole of it at £8 10s. a ton. Well, we did not do that, and have held on until this week. We have sold 170 tons at over £10 a ton—a fact which, I think, is highly satisfactory. The price is now from £10 5s. to £10 7s. 6d., and, considering that Broken Hill is falling off, according to what we see in the newspapers, from something like 1200 tons of pig-lead weekly to about half that quantity—which is a very important element in connection with the lead producers; and, considering that a great many of the German mines have fallen off in their production, and that in Spain, and various other parts they are doing the same, while in Wales nearly all the lead mines are closed, we may hope that when there is an improvement in trade—and trade is undoubtedly improving—there will be a very good advance in the price of lead. In the event of a rise of £2 or £3, we shall, I hope, be able again to pay profits to the shareholders.

Mr. WEST asked what were the most productive portions of the mine.

The CHAIRMAN replied that the stopes in the 70, 80, 90, and 100 fathom levels were the most productive points at present.

Mr. WEST said that with regard to Broken Hill within the last few months a gentleman who had come from Australia told him that the mines within a few months would be practically worked out. There was, however, another mine—the Mount Zeehan—that was now making something of a stir, and was ready to put 30,000 or 40,000 tons of ore on the market.

Mr. WHITLEY, who had been connected with Leadhills for a very long time, hoped that the mine was now turning the corner and that they were going to see a much better price for lead. Knowing something of mining, he could assure Mr. West that there was no reason for surprise if the ends should fall off for a time. Sometimes they did fall off, and then in a few fathoms they became rich again. He hoped the new points of developments in operation would result favourably, and that they would see a larger production of lead from the mine. Mr. Watson had mentioned his name in regard to the Raik vein, where a very good discovery was made when the mine was still young. They could hardly hope to find a bunch of lead like that; but, still, the lode was always a good one.

Mr. COPPEN proposed the re-election of Mr. Thomas Glen in cordial terms, which was seconded by Mr. WEST.

The CHAIRMAN said that Mr. Glen had been associated with the company for many years, and it had been a great gratification to the directors when he joined the board—(hear, hear)—with all his experience.

The motion was put and carried unanimously, and

Mr. GLEN, in the course of a brief acknowledgment of the compliment, said he believed they had now turned the corner, and would get on much better in the future.

Hearty votes of thanks to the Chairman and directors and staff, concluded the proceedings.

WHEAL FRIENDLY.

Call of 1s. 6d. per share.

A meeting of shareholders in Wheal Friendly was held at Paull's Hotel, St. Agnes, on Saturday, Mr. TWITE presiding.

The statement of accounts showed a total expenditure for the quarter of £725, including labour, £277; balance from last account £375; rates, £15; merchants' bills, £41; banker's charges, £17. The receipts included arrears of calls, £13; call of 6d. per share made November 30, 1894, on 9775 shares (less £98 arrears), £148; liabilities paid on 414 shares relinquished, £18; leaving a balance of £547 due to the bankers.

The CHAIRMAN said he thought they met under better auspices in Wheal Friendly that day than they had done for some time past. Tin had gone up in price, and stood now at a higher figure than it had for a long time. (Applause.) With the approval of the shareholders, they proposed to commence and work energetically that mine; to put down the shaft, and see if they had not a good mine there, as everybody believed they had. (Hear, hear.) What he had more particularly to deal with was the debit account. They would see they owed to the bank £507, and against that they had calls unpaid to the amount of £230. Now, the committee had gone very thoroughly into the matter of arrear of calls to see what they might look upon as bad, and what they might look upon as good. Having gone into the matter most thoroughly, they found the only amount they need write off as absolutely bad was £30. He had a cheque before him for £10 4s. 6d., and money was coming in in respect of calls. With regard to one of the larger amounts, they had satisfactory evidences that this would be paid within a reasonable time from that date. So the committee considered all the arrears of calls good assets of the company, with the exception of £30. As they were aware, since the last meeting they had had a change of management. The committee was not satisfied with the reports, or rather with the results following the reports of the late manager. They would remember at the last meeting, which was held in London, their late manager laid it down as a fact in his report, and in previous reports, that for a considerable time they had a lode worth ½ ton of tin to the fathom. It was no use for any committeeman to dispute the word of a manager when he said he had so and so; but it was in the power of one at a proper time to call upon the manager to produce such results to show that his reports were correct. Well, they called upon Captain Vivian to do this, and he failed to do it. Captain Vivian had left the service of the company, and Captain Cole had taken his place. (Hear, hear.) To St. Agnes men he need say nothing in praise of Captain Cole. But to those who did not know Captain Cole so well, he might say that Captain Cole had given satisfaction in every sphere in which he had been engaged from a miner to a mine manager. (Applause.) He had a good record from Wheal Kitty, the adjoining mine; and knowing the district very well, he knew what could be done in Wheal Friendly sett. He would ask Captain Cole directly to give his views on this matter, and he believed he would tell them that he was satisfied that in Wheal Friendly they had a property second to none in the county of Cornwall, and all that was required was rapid development and a new engine to put the mine in a good position. It was estimated that they would have to sink 60 fathoms to get into the flat lode of the adjoining mines. They had the Pink lode, which was one of the champion lodes of the district, and they knew how valuable it had been in Polberro and Penhalls. It was a lode worth a good deal; it had been worth three figures to the fathom; it had produced great riches in the other mines, and it was running right through their sett practically unworked, and after sinking a few fathoms below their bottom level they would be able to put men there to work this Pink lode. At the very outside it was estimated that a sum of £5000 would put them down to the Pink lode, and enable them to work it, and also would be sufficient to enable them to reach the flat lode. Now, they felt that with the improved state of trade which had taken place all through the country, and the jump in the price of tin, the time had come for dealing with this question, and the sooner the better; and the committee asked the confidence of the shareholders to join them in carrying this through. (Applause.) He might also say a few words with regard to the relinquishment of shares. As they possibly knew, a large number of the shares had been practically held by one or two gentlemen, and they felt very grateful to these gentlemen for having come into the county, and for having spent a great deal of money in Wheal Friendly. Well, these gentlemen, feeling that they held too large an interest in proportion to the other shareholders, had relinquished a good many of their shares, but were still with them, only to a smaller amount. The number of shares they were left with that day was 5460, all held by good men—shareholders, in fact, who seemed as if they would stand by and carry the work through. (Applause.) The work, it was thought, would take two years to accomplish, and they hoped to be down on the Pink lode and work on it within 12 months; so that they might look for results before a very long time had passed away. They would also endeavour to make the calls as small as possible. He now proposed the adoption of the accounts.

Mr. G. COULTER HANCOCK seconded, and the motion was carried.

The following report, which had been prepared by Captain Cole, by request, was presented:—

No. 1 winze below the 10 fathom level, on Pink lode. This is sunk 2 fathoms. It is 3½ feet wide, strong, and full of mineral (copper, mundic, and tin), and from its appearance an early improvement may fairly be expected.—No. 2 winze. This is being sunk and stoped east and west, and is producing about 40 lbs. of tin ore to the ton of stuff. The lode is 2½ feet wide, and has a very promising appearance. Considering that we are working at a very shallow depth, the prospects of the mine are very encouraging. Even at the present low price of tin, any point producing 40 lbs. to the ton will pay the cost of working it. By going deeper we should, no doubt, open up a permanent valuable property.

Captain COLE added that he must say in the first place that in Wheal Friendly they had a very valuable property. The work he recommended them to do would be to put up an engine on their shaft, sink the shaft, and get the West Kitty lode. They should also drive north and south to intersect the celebrated Pink lode. When this work was done he had not the slightest hesitation in saying that in Wheal Friendly they would have one of the finest properties in the county. In the adjoining mines they knew how productive the lodes had been. There was Pryor's lode in Wheal Kitty, and he was one of the first men to work on that lode some 30 years ago. It was worth 50 per cent. of tin, and was in some places 3 feet wide. That was a magnificent lode. Wheal Kitty made continuous dividends for a long time—he might say for 20 years. They knew what grand dividends the Great Flat lode had given in West Kitty, and, of course, they had a very good future in West Kitty. Being surrounded by rich mines, he thought they might expect when Wheal Friendly was developed they would have a dividend mine there for many years. (Applause.)

The CHAIRMAN proposed a call of 1s. 6d. per share.

Mr. GAIT seconded, remarking on the splendid reports which had heretofore been given in regard to Wheal Friendly.

In reply to Mr. GEORGE WILLIAMS (Teignmouth) the SECRETARY (Mr. T. Williams) said 9000 shares would be liable for the call.

A call of 1s. 6d. was then agreed upon, and on the motion of Mr. HITCHINGS, the following were elected a committee of the mine:—Messrs. Gait, Milburn, Hancock, Williams, Noall, and Twite.

A vote of thanks to the Chairman concluded the meeting.

AFRIKANDER GOLD MINING COMPANY (LIMITED).—An extraordinary general meeting of the shareholders in this company was held yesterday at Winchester House, for the purpose of considering and, if thought fit, confirming resolutions passed at a previous meeting increasing the capital of the company and effecting certain other alterations in regard to its management.—Mr. Malcolm S. Cooke, who presided, moved the confirmation of the resolutions, which was seconded by Mr. F. C. Bell, and carried unanimously.

— The WEST AUSTRALIAN GOLD CONCESSIONS (LIMITED) warrants for the interim dividend at the rate of 20 per cent. per annum for the quarter ending April 30, declared on the 7th inst. have been posted.

Since putting the Prospectus into type, the following cables, dated Perth, 15th May, have been received from Mr. Alex. Forrest:—(1.) "New Chum cleaned up 10th May. The clean up yielded 1475 ounces retorted gold. The mill ran 7 days. 110 tons crushed. Developments opening up splendidly." (2.) "Estimated profit 31st May, £14,000." This gives a total of 4375 ounces of gold won since the 1st January. The profit (estimated by Mr. Forrest) of £14,000 to 31st May is included in this Company's purchase.

The LIST will OPEN on SATURDAY, the 18th MAY, 1895, and CLOSE on or before TUESDAY, the 21st MAY, for Town and Country.

The Murchison New Chum Gold Mines, Limited,

WESTERN AUSTRALIA.

INCORPORATED UNDER THE COMPANIES ACTS, 1862 TO 1890.

CAPITAL - - - - - - - - - - £160,000,

In 160,000 Shares of £1 each, of which 40,000 fully paid Shares will be allotted to the Vendors in part payment of Purchase money; and 120,000 Shares are now offered for public subscription—Payable: 2s. 6d. on Application, 7s. 6d. on Allotment, 5s. on 1st July, 1895, 5s. on 1st August, 1895.

DIRECTORS.

SIR CHARLES W. F. CRAUFURD, Bt., 10, Warwick Square, S.W. (Director of the West Australian Gold Fields, Limited).
M. LEONARD DAVIS, Esq., 31, Lancaster Gate, W.
ALFRED C. MITCHELL, Esq. (of William Mitchell, Birmingham), 44, Cannon Street, E.C.
F. O'S. B. READE, Esq., 35, Warwick Road, Earl's Court, S.W. (Director of the Austin Gold Mines, Limited).

LOCAL BOARD IN AUSTRALIA.

ALEXANDER FORREST, Esq., M.L.A., Mayor of Perth, Western Australia.
C. P. DICKINSON, Esq., J.P., Perth, Western Australia.

BANKERS.

LONDON:—THE CLYDESDALE BANK (LIMITED), 30, Lombard Street, London, E.C., Glasgow, Edinburgh, and other branches in Scotland.
WESTERN AUSTRALIA:—THE UNION BANK OF AUSTRALIA (LIMITED), Lothbury, London, E.C., and Cue, W.A.

BROKERS

LONDON:—MESSRS. CUTCLIFFE, LEY, & MCCULLOCH, 7, Adam's Court, Old Broad Street, E.C.
GLASGOW:—J. BARNETT GOW, Esq., 59, St. Vincent Street.

SOLICITOR—EDWARD F. TURNER, Esq., 101, Leadenhall Street, London, E.C.

AUDITORS.

Messrs. FORD, RHODES, and FORD, Chartered Accountants, London.
Messrs. BROWN, FLEMING, and MURRAY, Chartered Accountants, 163, West George Street, Glasgow.

SECRETARY and OFFICES (*pro tem.*).—L. J. LANGMEAD, 23, College Hill, London, E.C.

PROSPECTUS.

This Company is formed to acquire the Mining Leases, granted by the Western Australian Government, of the well-known New Chum Gold Mining Property, situate at Mount Magnet, Murchison Gold Fields, Western Australia, comprising an area of 18 acres, together with the Machinery, Plant, &c., thereon.

This Mining Property was specially selected by the late Mr. W. T. Harding (who was the representative of the Venture Mining Syndicate, Limited), after spending some months examining mines in Western Australia. He described it as "certainly the best property on the Murchison without doubt."

Although the New Chum Mine commenced working only a few months since, the crushings yielded prior to 26th April no less than 5750 ounces of gold from 1470 tons—an average of nearly 4 ounces per ton. This result is the more remarkable, seeing that Mr. J. McCord states that "all stone broken to date has gone through the mill."

Mr. R. Piper, Mining Manager of the Broken Hill Proprietary Company, and Mr. J. McCord, Manager of the Nannine Gold Mining Company, W.A., both practical mining engineers of wide experience, were specially selected by the late Mr. W. T. Harding to examine and report on this property.

From their full reports, printed below, and from cables subsequently received, it will be seen that the reef yielding these returns has been cut at a depth of over 200 feet by a main vertical shaft; that an underlay shaft has also been sunk 180 feet, with levels at 80 feet (No. 1) and 140 feet (No. 2), showing a well-defined lode the whole depth; and that a further important discovery has recently been made of another reef in the crosscut at the No. 2 level carrying free gold.

The mine is already equipped with machinery, plant, and surface works, including a 10-stamp battery, 20 h.p. engine and boiler, 30 h.p. pumping engine, pumps, 20 h.p. Cornish boiler, 15 h.p. marine boiler, winding engine, steel poppet legs, buildings, and blacksmith's shop, &c., as detailed in Mr. McCord's report. The reports indicate that the supply of water is abundant, and suitable for all mining requirements.

This Company will take over the property as from the 1st January, 1895, receiving the proceeds of the gold won meanwhile, less expenditure. About 2300 ounces were obtained between that date and 26th April, and advices of another clean-up are daily expected. The development of the mine is now being vigorously pushed forward with the view of increasing the returns at an early date.

The following are the reports and cablegrams referred to:—

Mount Magnet, February 12, 1895.

According to instructions, I now have pleasure in submitting the following report on the property known as the New Chum Gold Mining Company, N.L., situate at Mount Magnet, Murchison Gold Field, on a belt of highly-auriferous country.

The property comprises 18 acres, nine of which are on the strike of the lode which is North and South, the remaining portion being on the underlie or dip of the lode. The reef can be traced for some distance through the property, also through the adjoining properties North and South, and is a true fissure lode, having a dip 70 degrees to the West.

Considering the short time the property has been occupied, a great deal of development work has been done. First there is an underlie shaft sunk on the reef to a depth of 180 feet, showing a clearly and well-defined lode the whole depth, both in the shaft and in the stopes, averaging from 2 to 4 feet in width, carrying highly payable gold the whole depth.

One hundred feet to the Westward of this shaft a main vertical working shaft 10 feet by 4 feet in the clear, has been sunk to a depth of 166 feet and securely timbered.

This shaft should cut the reef at about 200 feet, and the Manager informs me that it is now being sunk at the rate of 15 feet per week. A crosscut was put in at 140 feet from the surface, cutting the reef, and drives were put in on the lode for a distance of 159 feet North and 50 feet South, making total length of drives at this level 209 feet, showing a well-defined lode the whole distance. The lode is very strong under-foot, and has certainly improved very much at this depth. I had the rails from bottom of this drive taken up, and put shots in at various distances along the under-foot, and carefully took samples. I tested the various samples taken from this drive with most satisfactory results, getting equal to 4 ounces per ton. Judging from the nature of the walls and of the country rock, there is every reason to believe that the lode will continue to a great depth. The quantity of milling stone above this level in sight is about 3000 tons. I have examined the Books of the Company, and find that 1138 tons have been taken from the stopes and milled, which, according to Bank and Mint receipts, gave a total return of 3954 ounces. The gold is of very fine quality, showing value as per Mint return of £4 2s. per ounce. The stone crushed fairly represents the value of the ore, as all stone broken to date has gone through the mill.

I see no reason why the mill should not be kept continously running, the crushing capacity of same being about 400 tons per month.

I would advise that the main Shaft be pushed on with all possible dispatch as when the next level is opened up you will be in a position to increase your crushing power.

WATER.—The present supply is about 80,000 gallons per day, and is adequate to all present requirements; but I am of the opinion that the supply will increase as greater depth is reached.

MACHINERY AND PLANT.—There is a very complete 10-Stamp Mill, including Ripple and Blanket Tables, Berdan Pans and Tailings Pump, 20 h.p. Boiler and Engine, together with all necessary tools, &c. This plant is housed in a large galvanised iron building, and is most complete—with large Hopper to receive the ore as it comes from the Mine. At the Main Shaft there is a 30 h.p. Pumping Engine, with all necessary pumping gear, 200 feet of a 6 inch Draw Lift and Plunger Pumps, one 20 h.p. Cornish Boiler, one Marine Boiler—15 h.p., one pair of horizontal Winding Engines, one set of steel Poppet Legs, 30 feet high, Winding Ropes, Crab Winches, tackle for raising and lowering the pumps. This machinery is well and substantially erected, and is covered in with a large galvanised iron building, 40 feet by 20 feet. All the machinery on the Mine is new and in perfect working order. There is also a good Blacksmith's Shop and large Store-room, with complete set of tools, &c., &c.

SUPPLIES.—The Store contains all necessary mining supplies for working the Mine. There are also about 300 cords of excellent firewood stacked on the Mine, also a fair supply of mining timber, both of which are to be got within reasonable distance of the Mine. A manager's residence has also been erected on the Mine, containing four large rooms.

In conclusion, I may state that everything about the Mine is in perfect working order, and I beg to take this opportunity of congratulating you on having secured what I believe to be one of the most valuable properties in Western Australia.

(Signed) JAS McCORD,
Manager Nannine G.M. Co., W.A.

Mount Magnet, Murchison, W.A.,
18th February, 1895.

I beg to hand you my Report on the "New Chum" Gold Mine—a 9-acre lease * located on the slope of a slate and diorite range of hills parallel to the West. Mount Magnet Trig. Station and about 3 miles South of same.

The slates occur on the West side of the hills and the diorite on the East.

The reef being operated on outcrops nearly the entire length (12 chains) of the block, and has a main bearing North and South, and underlies to the West at an angle of 75°.

WORK DONE.—The work done consists of an underlay shaft sunk on course of lode to the 140 feet level (vertical depth). At 80 feet down intermediate level drives were extended, North 43 feet and South 53 feet, exposing stone 2 feet wide of over 3 ounces value. Below this, to the 140 feet level, the reef widened to 3 feet 6 inches, yielding quarts of nearly 4 ounces value.

A main vertical shaft, 10 feet by 4 feet within timber, is sunk 140 feet, a crosscut driven East 32 feet, and the reef intersected and connected with the underlay shaft.

Drives at this point have been put in, North 140 feet and South 48 feet. The reef is well defined, and discharging large quantities of water, and averaging 2 feet 6 inches wide, a distance of 80 feet producing stone yielding 3¾ ounces per ton. The Main Shaft is now being sunk by six men below the 140 feet level, and is 24 feet below the plat.

It is estimated that 9 feet per week can be sunk, the ground being fairly workable, and requires only a moderate amount of explosives. Stoping North and South has been continuously carried on since the forking of the water from the Mine.

The stopes are now within 16 feet of the intermediate drives. The reef here is 3 feet 6 inches wide, and will yield fully 3½ ounces per ton.

MACHINERY, &c.—The Main Shaft is equipped with winding gear, steel poppet head, and single cage road; also a 14 inch cylinder pumping engine (capable of working an increased size lift to greater depth), with 6 inches Cornish plant attached. An overhead tramway, connected with a 10 head battery, with latest gold-saving appliances attached, sand pumps, &c., the whole being driven by a powerful portable engine. The work in connection with the erection of the above has been well and faithfully done, and works without a hitch.

WATER SUPPLY.—There is water enough, and to spare, of superior quality, being comparatively free from incrustation, for all battery and Mine requirements. The daily flow from the pump-head is over 40,000 gallons.

FIREWOOD.—There are several months' supply in stock. It can be obtained at about 35s. per cord.

STONE IN SIGHT.—80 feet in length at the bottom drives, 2 feet 6 inches wide, 16 feet high by 60 feet long by 3 feet 6 inches wide at the intermediate level. After deducting 10 per cent. for contingencies, I estimate it will yield 640 cubic fathoms of quartz, or over 3000 tons, averaging 3½ ounces per ton.

CONCLUSION.—From past results and present appearances—the reef proving rich and strong 60 feet below water—the deduction is that there is no fear as to the permanency of the reef, and I would strongly advocate the sinking of the Main Shaft with all dispatch, the fixing of plunger—now on the Mine—at a proper depth, and open out when reef is tapped, when the proprietors will undoubtedly meet with the success they deserve, and will be handsomely rewarded for all outlay that may be incurred.

(Signed) RICHARD PIPER,
Late Mining Manager, BROKEN HILL PROPRIETARY CO.

P.S.—Surface and Working Plans will accompany this Report.—R. P.

Cable from Mr. H. W. TAYLOR (the late Mr. HARDING'S successor), dated Perth, 11th April, 1895:—

NEW CHUM.—The latest news is we have struck reef, Main Shaft, 208 feet, showing good gold; will give 70 feet in the stopes from the No. 1 level; brought down 1150 ounces.

Extract from cable from Mr. ALEX. FORREST, Chairman of the New Chum Gold Mining Company, N.L., dated Perth, 26th April:—

"Have struck reef at a depth of 204 feet vertical shaft. The grade of the ore is very good. Will continue sinking additional 50 feet before crosscutting. Have discovered another reef on the property, crosscut going west, No. 2 level, carrying free gold. Important discovery. Driving in both directions. Shall clean up 15th May. Expect the run will be about 1000 ounces. Prospects most encouraging."

The VENTURE MINING SYNDICATE, LIMITED, who, on behalf of themselves and other parties, are now entitled to an option to purchase the property from the NEW CHUM GOLD MINING COMPANY, N.L., of Perth, Western Australia, have fixed the price to be paid for the property, machinery, plant, stores, &c., as on the 1st January, 1895, including net profits from that date, at £145,000, payable as to £40,000 in fully-paid Shares, £40,000 in cash, and the balance of £65,000 in cash, or partly in cash and partly in fully-paid Shares, at the option of the Directors of this Company. £15,000 cash will be available for working capital, in addition to the profits from 1st January (estimated by Mr. FORREST at £14,000 to the 31st May). All expenses incidental to the formation of this Company will be borne by the Vendors, excepting legal and registration charges.

The following Contracts have been entered into:—

(A) An Agreement dated the 11th day of May, 1895, and made between the VENTURE MINING SYNDICATE, LIMITED, of the one part, and LYDSTONE JOSEPH LANGMEAD, on behalf of this Company, of the other part, being the Agreement under which the property is to be acquired by this Company.

(B) An Agreement dated the 5th February, 1895, the present parties to which are the NEW CHUM MINING COMPANY, N.L., of the one part, and the VENTURE MINING SYNDICATE, LIMITED, of the other part, being the Agreement under which (as modified by a subsequent Memorandum under the seal of the said NEW CHUM GOLD MINING COMPANY, N.L., and by a Resolution of the Directors of that Company) the Vendors are entitled to their said option.

Copies of the above-mentioned Agreements, the original Reports and Plans, and prints of the Memorandum and Articles of Association of the Company can be seen by intending subscribers at the Offices of the Company, and subscribers will be deemed to have waived their right to any further particulars as to such Contracts under Section 38 of the Companies' Act, 1867.

The Vendors have also entered into Contracts in connection with the guaranteeing of a portion of the Capital, the proportions in which the Vendors are entitled to the property, and the providing of the expenses attending the formation of the Company, but the Company is not a party to any of these Contracts. These may be considered Contracts within Section 38 of the Companies' Act, 1867, and subscribers will be deemed to have had notice of such Contracts, and to have waived all rights (if any) to particulars thereof, whether under that Section or otherwise. Mr. READE and Mr. MITCHELL, two of the Directors, also have an interest in the option to purchase the property.

Applications for Shares should be made on the accompanying form, and forwarded to the Company's Bankers, together with a remittance for the amount payable on application. The allotment will be made as early as possible after the subscription is closed, and in cases where no allotment is made, the amount deposited on application will be returned at once without deduction. If the number of Shares allotted be less than that applied for, the surplus will be credited in reduction of the payment on allotment so far as necessary, and any balance will be returned.

Prospectuses and Forms of Application may be obtained from the Bankers and Brokers, and at the offices of the Company.

18th *May*, 1895.

* This Report only deals with one of the Company's two leases, which together comprise 18 acres.

GWELO (MATABELELAND) EXPLORATION AND DEVELOPMENT CO. LD.

A Happy Commencement—Successful Negotiations with the Promoters.

THE first ordinary (statutory) general meeting of the Gwelo (Matabeleland) Exploration and Development Company, Limited, was held on Thursday at the Cannon Street Hotel, Mr. Charles J. Fauvel presiding.

The SECRETARY (Mr. J. Tucker) read the notice convening the meeting.

The CHAIRMAN said that in giving briefly a review of the past, he was perhaps going out of the ordinary line of business of a statutory meeting. It was customary for the chairman at such a meeting to state: "Gentlemen, we have nothing to tell you," but he intended to deal with matters in a different way. First of all, he wished to state that the company was formed with a capital of £250,000 in 10s. shares. He stated a short time ago, in reply to a letter which appeared in the newspapers, that the first properties acquired by the company were 100 claims, situated at Gwelo in Matabeleland, and that those claims originally came from Arthur M. Rhodes and others. About the time he joined the Board he was told that the claims were very good, and this information came from a gentleman who had been on the spot and seen one or two blocks of the property, especially the Anderson block, of which he spoke very highly. After the company was formed he (the Chairman) was asked if he would go out to report upon the five blocks which were situated at Gwelo, and, after due consideration, he consented to give up some other work in order to go out to Matabeleland to report upon the property.

He was introduced to the promoter with this end in view, and finding that he was acquainted with mines of this kind they considered that it might be beneficial to the company that he should join the Board, and, accordingly, they asked him if he would do so. It was thought that if he accepted the chairmanship of the company he would be in a position to know what was going on, and that probably his going out to Africa would be of immense service to the company in other ways—namely, in the capacity of an expert. Well, he joined the Board, and a proposition was afterwards made that the company should acquire a property called the New Glasgow Estate. He went through the papers in connexion with it, and but he was dissatisfied, and expressed his dissatisfaction to his co-directors, and also to their solicitors, and the promoter. He was dissatisfied because the property did not appear to carry the mineral rights. This company, although an exploration and development company, was not really going to develop a farm, or to grow cabbages and potatoes. The objects which the company had in view were to acquire mining rights on the best possible terms, and to develop them. When they spoke of an exploration and development company they did not mean buying properties which were already developed. Their object was to acquire properties to develop them and fit them for public companies. Well, it did not seem to him right that they should acquire a property without mineral rights, and with the consent of the promoter a clause was inserted in the agreement by which they should not actually take the property from the vendors unless it carried with it the mineral rights. If it did not they were to have it as a present, and the promoter was to lose his money. When he told the promoter about this he brought a gentleman to him, and after talking the matter over he agreed there and then to secure mineral rights for them. A cablegram was sent to Africa with that object in view, and to secure for the company, if possible, 1000 claims on the New Glasgow Estate. The company wanted value for their money, and if they had to develop those mineral rights they wanted something to look forward to. The vendor of that property came forward and said he would secure the mineral rights; they had not up to that date been secured or pegged out, but he would cable at once. He believed this was done, and the directors would probably hear from him shortly. If the object of the company was to explore and develop, they wanted something on which they could go to work. His object in remaining on the Board had been to act as a trustee for the shareholders. He had taken off his coat to the work, he had staked his reputation as an expert by remaining on the Board, and he wished to show the shareholders that the directors were endeavouring, and that they had a great possibility of making the Gwelo Company a great success. (Hear, hear.) Every shareholder wanted his shares to be at least at par, and he would say more later on on that subject, and the reason why they were knocked up and down. There was no necessity for a scare on the part of the shareholders, and he wished to inspire everyone present with confidence in the company, and to get the shareholders to place confidence in the gentlemen who were working for them. He and his colleagues were prepared to retire if they did not receive the confidence which they were seeking to establish, but otherwise they would go to work honestly and straightforwardly, and the shareholders would know in course of time—probably very quickly—what they could do. He had been looking into all the weak points of the company, and he had boldly gone forth determined to carry out certain objects, and to endeavour to do one thing—either to succeed or to give the matter up. Now they had got matters placed on a basis which he hoped everyone present would approve of. He was not satisfied as an expert that a working capital of a little over £56,000 was sufficient for a company like this. He had spent years in Africa and in other parts of the world developing and working mines, and he knew what this cost. They wanted, if possible, to get a return of the whole of the capital within the next two or three years, and upon the top of that they would probably look for a good percentage, and they must have something to do it with. When the £56,000 was spent the shareholders would probably be down upon the directors. They did not want that. He accordingly set to work with one object in view, and eventually he disclosed that object to his co-directors, and it met with their approval. It was to go to the vendors and promoters, and say: "You have left us with so much working capital, you have done so and so; what else are you going to do?" "You are going to send out an expedition?" "Yes" "Send it out at once." He received the money for this purpose, and the men were now on the spot. No cablegram had yet been received from them, but when it was the shareholders would know it. They had been told, however, from other sources, that the blocks which had been pegged out were very good. They were registered in the names of Arthur M. Rhodes and others. These gentlemen were not like the ordinary counter-jumpers who bought claims simply because an old prospector told them they were good. They had a better reason, and that reason was, in his opinion, that the property was good. However, they would know sooner or later whether it was good or bad. The prospecting party was there, and he would also go out shortly. The next object he aimed at was to have a few shares put into the coffers of the Company. He went personally to the vendors and promoters, and said: "Gentlemen, the position of the Company is so and so; we want it to be a great success; you must give me a transfer for 50,000 fully-paid shares for the nominee of Messrs. Arthur Rhodes, Scott, and their co-vendors, in addition to the money which you have given them, and you must further give me back 200,000 shares for the Company." The result was that he came away with 200,000 shares, which were now in the treasury of the Company. (Applause). He had in his possession the transfer and certificate made out in his name, as trustee of the Gwelo Exploration & Development Co. In addition to that, he had a little document which controlled further shares. The shares, therefore, ought to be worth par, for no share, so far as he was concerned, if it could possibly be avoided, would be sold from this date below par. One gentleman said he could sell those 200,000 shares now at par, and that would mean £100,000 profit to the company. They had now great possibilites before them. With £131,250 they ought to be able to do an immense amount of work. He did not know of any other exploration company with the same working capital. They might have a smaller acreage of land, but they had the opportunity of acquiring more. In one of the financial papers of that day he saw that a certain company had acquired 200,000 acres on condition that they spent £10,000 on it. Surely this Company could afford to spend £30,000 and acquire 600,000 acres, and even then they would be in a stronger position than the company referred to, because they would have a large working capital left. The promoter of the Gwelo Company had gone so far that morning as to say, "If you make the company a success, I will give you a present." If, therefore, he made it a success, the shareholders would benefit. The Chairman then exhibited the power of attorney in favour of Mr. Summers to come to England to sell the property, and stated that it bore the signatures of

Arthur M. Rhodes, John E. Scott, John Bryne, Francis H. Dawkins, and Mr. H. Smith. If the property turned out as he anticipated, they would have a chance of doing well by forming two or three subsidiary companies. In conclusion, he asked for the confidence of the shareholders. He would do so by offering his resignation. If they were satisfied with what he had done, and wished him to remain on the Board, he was prepared to work for them, and to give his services for a small remuneration in order that he might draw the company out of the mire, and set it firmly upon a rock, and make it stand equal to almost any other in the market. (Applause.)

Mr. W. F. REGAN, speaking as a large holder, asked if a cable had been received by the company recently to the effect that two payable reefs had been opened up on the verge of the New Glasgow property.

The CHAIRMAN: Not that I am aware of.

Mr. REGAN also asked if the directors were aware that there were fifty men now washing for gold on the Tokwe River, five miles of which the company owned, and that these men were recovering gold in large quantities.

The CHAIRMAN said the directors were not aware that any men were working there. His suspicions, however, had been aroused. Very often, if a good reef was struck in a mining country, somebody else was working both at the tail and at the other end of it. They did not leave a good reef. At the time when the new Glasgow Estate was acquired the directors had no knowledge of anything. There might have been some discoveries since. The Company, however, had sent one prospecting party out, to be divided eventually into three—one to go to New Glasgow to see the property, a second to remain at Gwelo, and the third to go further afield. The party had just arrived, but they had scarcely had time to get over the five Gwelo properties.

A SHAREHOLDER inquired if the Company had perfected its title to the New Glasgow property.

The SOLICITOR replied that the title had not been absolutely completed, although the conveyances were ready for execution by the vendors.

The CHAIRMAN added that the Company had a right to the property, provided he reported on it favourably. If not, they would have it as a gift. He believed Mr. Regan was acting in good faith. The money he had taken from the New Glasgow he had invested in Gwelo shares. (A Voice: "At 3s. 6d.")

Mr. REGAN said that an insinuation had been thrown out that he had bought his shares at 3s. 6d. He held about 200,000 acres of land in South Africa, and he thought that any statement he might make ought to be taken as truthful. (Hear, hear.) When he first offered the New Glasgow property to the Company, he had never seen the gentleman who approached him. That gentleman offered him a price for it in shares, but he refused to accept it, because he knew nothing of the Gwelo Company. He made inquiries, and was not satisfied. Subsequent correspondence from South Africa disclosed the fact that some of the assets of the Company were very valuable, and a few days after the receipt of that correspondence he sold the New Glasgow property. Since then he has vested every penny he had received for that property in shares in the Gwelo Company. He bought and paid for them 8s. a share—(applause)—and he intended to hold them. One of the letters he had received was dated Victoria, 8th April, and was as follows:—Dear Sir,—Within the past seven days there has been great excitement here, and a rush to peg off land to the south of your property known as the New Glasgow. Now, there is not one inch of ground to be had, unless you pay a very heavy price for it. It has been found that a part of New Glasgow is located on the gold belt, and payable reefs of extraordinary richness have been opened up on the verge of New Glasgow. Further, there are about fifty men from Victoria washing for gold, and obtaining the dust in payable quantities along the Tokwe River, running through your property. It is a matter of opinion whether this gold is washed down from properties above you, or if it comes from your land. I am disposed to entertain the latter idea. Why don't you make a start to develop the 6,000 acres? All round you every man is opening up, whilst you remain inactive, and longing eyes are cast in the direction of the New Glasgow property. Cable me if you are still the owner; if not, without disclosing the contents of this letter, please put me in direct communication immediately with the present owner, and I shall pay you a handsome commission. Cable me on receipt owner's name. The Cotopaxi is now crushing day and night with excellent results." (Applause.) He thought that letter spoke for itself, and if any shareholder was anxious to know the extent of his holding, which he bought and paid for, he would only be too delighted to answer the question. When the letter was written his agents were under the belief that he still owned the property. He could not say if the company had issued a map of the New Glasgow property, but a reference to such a map would show that the Tokwe River ran for five miles through the company's property.

The CHAIRMAN stated that he had prepared a map which showed that the Tokwe River ran the whole length of the property.

Captain MIDDLETON said that three days ago he bought 2,000 shares, and knowing something about the property he intended to hold them. He advised all the shareholders to do likewise.

Mr. REGAN explained that he was not connected with the promotion of the Gwelo Company in any way. He was asked to render assistance, and he had done so, but not until he discovered that Mr. Fauvel was making certain arrangements to put the finances of the company on a proper basis.

Captain MERCER said the shareholders had great reason to congratulate themselves that they had at the head of the company a chairman who apparently embodied in his anatomy not only an expert in mining, but a financier and a diplomat. They had to thank him for the very straightforward way in which he had placed before the shareholders the facts connected with the working of the company since its inception. The vicissitudes of an exploring company were many and great, particularly in its childhood, and they had no reason to expect any very great return in the earlier stages of its existence, but, from what the Chairman had said, he thought they might safely congratulate themselves that they possessed a property from which they would derive great benefit. They might have to wait or they might not; that depended upon Dame Fortune. In conclusion, he thought the shareholders should ask Mr. Fauvel to resume the reins of government, and thank him for his able management so far of the affairs of the company. (Applause.) He moved a motion to this effect.

Mr. R. D. WILKINSON seconded the motion, and said it would be a most suicidal act on the part of the shareholders to do anything which would cause them to lose the services of Mr. Fauvel. He had never heard a more straightforward statement than that which had been given by the Chairman that day, and he thought they had reason to congratulate themselves that in him they had a man of courage and a man of resource, and if anyone could make the company a success he was the one to do it. He thought there was every prospect of the company becoming a very great success. In his opinion, the possibilities of Matabeleland and Mashonaland were at present but little realised. He believed that the riches to be got out of them in the course of a few years would vastly exceed even the great wealth which was now being drawn from the Transvaal, and amongst all the companies which had been formed for the purpose of exploring those countries and earning that wealth, he believed this company had now, thanks to the help of their Chairman, every prospect of occupying a foremost place. (Applause.)

The motion having been unanimously adopted,

The CHAIRMAN announced his intention of withdrawing his resignation, and informed the shareholders that the directors would now go to work quietly to make the company a great success. He was sure the shareholders would join with him in thanking Mr. Regan for his kindness in disclosing that information which he had gained privately concerning the Company's property. (Applause.)

This terminated the proceedings.

— The London committee of the MOODIE'S FORTUNA GOLD MINING COMPANY (LIMITED) notify that, inasmuch as a complete African register has not yet been received in London, and shares Nos. 1-32,000 and 47,001-500,000 have not yet been transferred to the English registor, they are not prepared to pass transfers relating to any of those shares pending the receipt of the complete African register, which they expect to have at a very early date.

EXPLORATION COMPANY, LIMITED.

The reconstruction scheme unanimously adopted.

An extraordinary general meeting of the Exploration Company (Limited) was held on Thursday, at Cannon-street Hotel, Sir HORACE FARQUHAR, Bart. (the Chairman of the company) presiding for the purpose of passing the following resolution:—

1. That it is desirable to reconstruct the company, and that with a view thereto the company be wound-up voluntarily, and that Sir Horace Brand Townsend Farquhar, Bart., Francis Alfred Lucas, James Rochford Maguire, M.P., Harry Mosenthal, Dilwyn Parrish, John Edward Dudley-Ryder, and Hamilton Smith, the present directors of the company, be and they are hereby appointed liquidators for the purposes of such winding-up.—2. That the said liquidators be and they are hereby authorised to consent to the registration of a new company, to bear the same name as this company, and with a Memorandum and Articles of Association, which have already been prepared with the privity and approval of the directors.—3. That the draft agreement submitted to this meeting, and expressed to be made between this company and the liquidators of the one part, and the new company of the other part, be and the same is hereby approved, and that the said liquidators be and they are hereby authorised, pursuant to section 161 of the Companies Act, 1862, to enter into an agreement with such new company (when incorporated) in the terms of the said draft, and to carry the same into effect, with such (if any) modifications in the details thereof as they may think fit to assent to.

The SECRETARY (Mr. Ernest C. Pulbrook) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—I wish first, in the few remarks I have to make, to state that before we called you together to lay before you this, if I may so call it, very lucid circular, we consulted nearly all the largest and most important shareholders of the company. We thought before framing this circular and taking the step that we have taken, we ought to be quite sure that those who are most largely interested in the company are of the same opinion as the directors, who, I believe, are also some of the largest shareholders in the concern. You will see that our first object is to call up our capital. We have found that the business of the Exploration Company, with so small a paid-up capital as £30,000, has become daily more and more difficult. The profits we have been able to give you on that small capital I think I may say have been, on the whole, satisfactory. (Applause.) But certainly, if you come to consider the profits which have emanated from the affiliated companies which have been issued first to the shareholders of the Exploration Company, I think I am not incorrect in saying that they have amounted to upwards of £1,000,000 sterling. (Renewed applause.) So far, I think, the shareholders of the Executive Company have no reason to complain, but, after very careful consideration, we have come to the conclusion that it was difficult for us to go on on the same lines. The assets of the companies affiliated to the Exploration Company to-day amount to over £1,500,000, and they have become so powerful that we have made up our mind that we should be in a better position if we call up our capital of £300,000. To do that it became necessary that the founders' shares should cease to exist, and you will see in the circular I have in my hand, and which I have no doubt you have all read with great care, how we propose to deal with half the capital—that is to say, £150,000 out of the £300,000 that we are about to call up. The founders' shares will have to provide that half on the terms specified in this circular. Amongst other reasons for the course that we are now seeking your confirmation of, I may state that we have very valuable options. We have the option of 40,000 Transvaal and General shares, and also of 12,500 shares in the French Compagnie des Mines in Paris, who are now acting as our agents in Paris. Both of these large options require at least £100,000 to be availed of, and besides that we have had, as you know, under consideration amalgamation with the Transvaal and General Association, and we have still more important amalgamations even, in contemplation. I do not wish to prophecy, because it is always unwise to do so, but there is every indication of good sound business in the future for this year, and, I hope, for a few years to come. I am not talking of speculative business, but of good, sound commercial business; and we hope, by amalgamation with those companies which have such large resources, and being able to contribute to those resources ourselves, we shall be able to do a very fine business for our shareholders. (Applause.) One of the reasons why we think there is a good indication for the future is the very large production of gold that you all know is likely to come into circulation this year. If you refer to statistics, you will see that I am perfectly correct in saying that the world will produce £40,000,000 of gold in 1895, as against £20,000,000 or less some 10 years ago; and this, we think, is a favourable indication, with the price of money, as well as the general confidence which seems to be returning in the City. These circumstances lead us to suppose that, with the very ample means we have at our disposal, first by calling up the capital of the Exploration Company, and then by the amalgamations that we have in view with the affiliated companies, we shall be able at a not very distant date to tell you that we have not only formed a very strong and powerful company, but that we have been able thereby to produce very satisfactory results to our shareholders. (Applause.) Now, gentlemen, I do not think that I have much more to say to you. We hope to go on as soon as we can now with the Central London Railway, and to take that up and carry it through before long. I will now call upon Mr. Rawlins to read the agreement, and answer any legal questions referring thereto. (Applause.)

Mr. RAWLINS (solicitor) read the agreement referred to, which set forth that the new company was to take over all and singular the assets and liabilities in connection with the old company, and the undertaking and business and goodwill thereof, with the full benefit of all contracts, &c., to which the old company were entitled, and also the real and personal property of the old company. As part consideration the new company shall undertake to satisfy and discharge all the debts, liabilities, and obligations of the old company whatsoever, including a payment to the directors of the old company of £1000. Mr. Rawlins explained that the latter item arose in this way. When the Transvaal and General Association (Limited) was formed, the directors of the Exploration Company practically became the directors of the Transvaal and General Association. The Transvaal and General Association paid one-half of the remuneration, and this company was left exactly in the same position as it was before—that is, that the directors received simply £1000 a year, which was allowed them under the Articles. To put things right, as between the two companies, that required to be altered, increasing the amount to £2000, of which the Transvaal and General Association paid one-half. Those words were introduced into the agreement to carry out what had been the understanding from the time the Transvaal and General Association was first started. The agreement went on to recite that, as further consideration, the new company would pay all costs of winding-up. And, as residue consideration for the transfer, the new company shall allot £300,000 shares in its capital (of £1 each), on the footing that the allottees thereof shall pay up 4s. per share on application, 4s. per share on allotment, 6s. per share one month after allotment, and the balance of 6s. per share two months after allotment. 150,000 of the said shares shall be dealt with as follows—that is to say, every member of the old company holding ordinary shares shall be entitled to claim an allotment of his rateable proportion of the said shares, and shall be entitled to the net proceeds of the sale of any fraction belonging to him. The remaining shares shall be dealt with as follows—that is to say, every member of the old company holding founders' shares shall, in respect of each founders' share held by him, be entitled to claim an allotment to himself of 75 shares of £1 each in the new company. In conclusion, Mr. Rawlings offered to give any further information that might be desired by the shareholders in respect of the agreement.

The CHAIRMAN: Gentlemen, now that our solicitor has read the legal part of this reconstruction, I shall be glad to hear if any of you have any remarks to make regarding it.

Mr. GIBSON: I am a very small shareholder in the company, but, reading through this circular, it does seem to me that the advantages are given very greatly to the founders' shares, without, perhaps, quite sufficient consideration to the ordinary shareholder. Taking it from what you said, Sir—I do not wish to appear captious in any way; but from what you said, we have a very satisfactory outlook for our business. At present these shares stand at about £2 premium. Taking it for granted that same premium, at all events, is to remain on the shares of the new company—taking it only at £1 per share, I have worked it out, and I find that you are making a present of £150,000 to the founders of this company, whereas you are only giving a bare £2000 to the ordinary shareholders, which is equal to 7½ per cent. on their present holding—I venture to say that those figures indicate that this scheme may be a little unfair to your ordinary shareholders.

Mr. RAWLINS: I think you must have misunderstood the object of the arrangement. Practically, as things stand at present, the founders are entitled to half the profits, without contributing any capital. Under the new arrangement, the capital being required, the founders, who get half the profits, will subscribe half the capital. Therefore, instead of its being an advantage to the founders, at the expense of the ordinary shareholders, it is quite the other way. They are to find, equally with the ordinary shareholders, their share of the capital, and, equally with the ordinary shareholders, get the profit. (Cheers.)

The CHAIRMAN: I think, gentlemen, that the remarks of the hon. shareholder have been very fairly answered by our solicitor. You will see that the founders' shares have really by this arrangement, to put it as accurately as possible, to contribute an equal amount of capital with the ordinary shares. Of course, we hope that the premium will remain on all the shares. It is the founders' shareholders who have to find the capital. Mr. Smith reminds me that a good many of the founders' shareholders have grumbled a great deal at this arrangement. They think it is rather hard upon them to contribute one-half of the capital. However, that arrangement has been made, and that is the arrangement we have proposed to you, because we are anxious to have our £300,000 paid up. We think it is for the benefit of our shareholders that it should be called up, and we have come to this decision, after most careful consideration and discussion with those who are most largely interested in the company. I conclude that there are no other remarks to be made, and, therefore, I will ask the solicitor to read the resolutions.

Mr. RAWLINS accordingly read the resolutions.

The CHAIRMAN: I have the honour to move those resolutions.

Mr. LUCAS: I have very great pleasure in seconding them.

The resolutions were carried unanimously, amidst cheers.

The CHAIRMAN: The extraordinary general meeting, to confirm these resolutions, will take place on Thursday, June 6, at 2 o'clock. Before I leave the chair I must just add one word to say on behalf of myself and my colleagues, that we appreciate very much the decided feeling of confidence that our shareholders have shown in us to-day by so unanimously adopting the resolutions and the scheme that we have had the pleasure of proposing to you. We can only assure you that we shall carry out that scheme to the very best of our endeavours, and we hope that it will prove as successful as we all can wish. (Cheers.)

A SHAREHOLDER: Do I understand that you contemplate amalgamation with the Transvaal and General Association?

The CHAIRMAN: Yes; we have that in contemplation.

A SHAREHOLDER: I have the honour to propose a vote of thanks to the Chairman and directors for their very great services to the company. (Cheers.)

A SHAREHOLDER: I will second that.

The motion was carried.

The CHAIRMAN: Gentlemen, I think I almost anticipated your vote of thanks, in the few remarks I made to you, before I sat down. I can only repeat that we shall use our best endeavours to make the resolutions, that we have put before you this day, prove of very great benefit to the shareholders.

The meeting then closed.

A NEW WESTERN AUSTRALIAN COMPANY.—One of the latest additions to the list of Western Australian mining companies is the Mallina Consols (Limited), which has a capital of £160,000 in shares of £10 each. From information before us we learn that the property consists of two leases of 12 and 6 acres respectively, known as "Naughton's New Find," and which immediately adjoins the well-known Mallina Gold Mine. In a report by Mr. A. H. Salmond, M.E., that gentleman gives it as his opinion that "there is no doubt that rich chutes of gold exist in the quartz throughout the lease; that there is a plentiful supply of water by sinking 50 feet, and plenty of fuel in the neighbourhood." Mr. F. C. McGregor, M.E., says: "The lode runs east and west and underlays to the south, dipping about one in three. The stone is well mineralised, and carries heavy gold of good quality. It is full worth about 2½ ounces per ton. On the same lode in the adjoining property, some hundreds of tons of remarkably rich stone has been taken, some of it estimated to give over 30 ounces to the ton. At 30 feet depth the lode is strong and well defined, and is opened out east and west by two drives of fully 50 feet; and there are already over 1000 tons of stone in sight which will average fully 2½ ounces per ton. A never failing supply of water is always available. I consider this a remarkably good property, which cannot fail to pay handsomely."

COAL MINES REGULATION BILL.—CONFERENCE OF MASTER AND MEN.—A joint conference of the coalowners and miners in the United Kingdom was held on Thursday at the Westminster Palace Hotel, London, to consider the clauses of the Coal Mines Regulation Bill which the Home Secretary has introduced during the present Session, with the object of amending the existing legislation on the subject. The following official statement was made to the Press with the concurrence of both Mr. T. Ratcliffe Ellis, on behalf of the Mining Association of Great Britain, and Mr. T. Ashton, the general secretary of the Miners' Federation of Great Britain, for the men, at the termination of the conference:—"At a meeting held on Thursday at the Westminster Hotel, between the representatives of the coalowners and the men, Mr. A. C. Briggs, President of the Mining Association of Great Britain, in the chair, the Bill was further considered, and satisfactory progress made, and it was ultimately decided to refer to a small joint committee the points on which an agreement had not been arrived at."

The Swan Syndicate Limited, 30 Finsbury Circus, London, E.C., invite Subscriptions for the Capital of the under-mentioned issue.

HANNAN'S STAR GOLD MINES Ltd.

EAST COOLGARDIE GOLD FIELD, WESTERN AUSTRALIA.

CAPITAL - - - - - - - - £80,000.

In 80,000 Shares of £1 each.

Of which 25,000 are to be allotted as part of the purchase money, 5,000 are reserved, and 50,000 are now offered for public subscription at par, payable as follows—2s. on Application, 3s. on Allotment, 5s. one month after Allotment, and the balance as may be required in calls not exceeding 5s. each.

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ROBERT THOMSON, 173 St. Vincent Street, Glasgow, Director, Kanowna Gold Mining Co. Limited.
*JOHN MORISON (MORISON & MARSHALL), Winchester House, E.C.
* Will join the Board after allotment.

Bankers.

THE NATIONAL BANK OF SCOTLAND LIMITED, 37 Nicholas Lane, London, E.C.; Head Office, Edinburgh; and Branches in Scotland.
UNION BANK OF AUSTRALIA LIMITED, Western Australia.

Brokers.

M. MOCATTA, SON & BROWNE, 10 Copthall Avenue, London, E.C.

Solicitors.

LONDON—BURN & BERRIDGE, 11 Old Broad Street, E.C.
GLASGOW—RUSSELL & DUNCAN, 175 West George Street.

Managers.

JAMES BROTHERS, Mining Engineers, 14 Sherborne Lane, London, E.C.

Auditors.

LONDON—FORD, RHODES & FORD, C.A., College Hill Chambers, E.C.
GLASGOW—JOHN MANN & SON, C.A., 188 St. Vincent Street.

Secretary and Offices *(pro tem.)*.

J. MARTYN MILNE, 14 Sherborne Lane, London, E.C.

ABRIDGED PROSPECTUS.

This Company has been formed to acquire and work two important Gold Mining Leases, Nos. 77 and 183, known as the "Star of the East," situated in the Mining District of Kalgoorlie (formerly known as "Hannan's"), about 24 miles by direct road north-east of Coolgardie, with which it has telegraphic communication.

The leases adjoin each other. No. 77 contains 12 acres, and No. 183, 6 acres, the combined area of the two properties being 18 acres.

The property is situated in a remarkable belt of auriferous ground south-east of the township of Kalgoorlie. This belt is several miles in length and contains numerous lodes.

The following are extracts from the conclusions arrived at by Mr. W. Thompson, M.E.:—

> The main lode in Lease 77 shows, where opened, a width of about 16 feet; there is reason to believe that the full width has not yet been exposed. It has been driven on for 70 feet at a depth of 65 feet, and in every case assays and panningshave given unusually good results. On the surface also where the reef has been cut into to a depth of 7 feet, at a distance of 78 feet from the shaft, the return was 7 oz. 17 dwt. 1 gr. to the ton; 128 feet distance from this point, at a depth of 65 feet, the return from the face of the drive was 11 oz. 12 dwt. 11 gr. to the ton; and from the cut put in beyond what had hitherto been considered the hanging wall, a large sample gave the high return of 31 oz. 10 dwt. 1 gr. Taking the average of all the samples for the whole length of the lode exposed, we get a return of 12 oz. 9 dwt. 17 gr. to the ton.
>
> "Assuming the average width of the lode for the whole length exposed to be 6 feet, there are at present about 4,160 tons of ore in sight, and assuming that 5 oz. per ton (of gold) will be recoverable by ordinary battery processes, we have available a gold value of about £73,000."

Mr. Cordner-James, Mining Engineer, A.M. Inst. C.E., Managing Director of the British Coolgardie Prospecting Syndicate, Limited, who examined the property in September last, in a letter to the Directors of the Syndicate, dated 28th January 1895, states:—

> "In reply to your enquiry whether the result of my examination of these leases in September last may be considered as confirming that of Mr. Thompson, as embodied in his Report, I have the pleasure to lay before you the following information:—
>
> "Mr. Thompson's description of the 'Locality' of the leases agrees with my own observations.
>
> "Regarding the 'Lodes,' I was able to distinguish at least two distinct auriferous deposits running nearly parallel, having a general bearing of N. 40° W., and separated by a distance of about 180 feet.
>
> "I was unable to determine exactly the nature of these deposits, which, although well known at Hannans, are quite different from the quartz-veins which I examined in other parts of the Goldfields.
>
> "The belt in which they occur covers a large area. The ore is mainly silicious, of a ferruginous nature, and having an irregular banded structure. The deposit upon which the principal developments have been made appears to be confined to Lease No. 77, whilst the other appears in that lease and also in Lease No. 183.
>
> "'Work done.' At the time of my visit the Main Shaft was sunk to a depth of 45 feet. The first level was started at a depth of 20 feet from the surface, and the second level 40 feet from the surface. In other respects I am fully able to confirm the statements regarding the 'workings,' and of the gold values of the deposit therein exposed, both as described in Mr. Thompson's report under this head; and I may state that in three important samples of ore taken from the main shaft workings by myself, my assay results were nearly double those obtained by Mr. Thompson. It was in view of the satisfactory result of my own examination that I initiated on your behalf the negotiations for the purchase of this property, which have since been successfully completed."

Taking an annual production of only 5,000 tons of an average value of 5 oz. per ton, worth, say, £3 10s. per ounce, and allowing at the high rate of £4 per ton for working expenses, this would give an annual profit of over £65,000. After the completion of the Railway (already constructed to Southern Cross), the extension of which has been authorized and surveyed as far as Coolgardie, and the consequent reduction in charges, the working expenses should be reduced considerably below £4 per ton. It is expected that additional profits will result from the erection of a Cyanide Plant.

The vendors have fixed the price to be paid for the property at £60,000, payable as follows: (1) £6,000 in cash; (2) £25,000 in fully paid shares, and the balance in cash or fully paid shares, or partly in cash and partly in fully paid shares, at the option of the Directors. The Company will not pay any expenses of the formation and promotion of the Company other than the Government stamps and fees on registration and the cost of the transfer of the property to it. Of the shares offered for subscription, the Directors have decided to appropriate 15,000 for providing working capital, reserving 5,000 shares to provide further working capital as required.

The following contracts have been entered into, viz.: An Agreement, dated 10th May 1895, between the British Coolgardie Prospecting Syndicate Limited, and J. Martyn Milne, as Trustee for the Company, and an Agreement, dated 10th April 1895, between the British Coolgardie Prospecting Syndicate Limited, and T. S. Marshall.

Agreements have been entered into with third parties as to the promotion of the Company and the subscription of its Capital, to none of which the Company is a party, and applicants for shares will be deemed to have notice of the contents of these, and to have waived their right, if any, to particulars thereof, whether under section 38 of the Companies Act, 1867, or otherwise.

VICTORIAN GOLD MINING.

By THOMAS CORNISH, M.A.I.M.E., Author of "Our Gold Supply," &c.

BALLARAT, of all the Victorian gold fields, stands out most prominently in historic and gold mining fame. It was here the first discoveries of practical importance were made, causing the great rush in 1851, which was quickly followed by other rich discoveries in various parts of the colony. Ballarat gives its name to the City of Ballarat, in the county of Grenville, and the town of Ballarat East, in the county Grant, divided by a small stream—the Yarrowee—which only in flood-time is really dignified by the name of river. The two towns are in reality one, although under two municipalities. The early rivalries of their history have not yet blended the municipal government into one harmonious whole; while south of the city, on the plateau, is another town—Sebastopol—which should also be merged into the trinity of Ballarat. To the ordinary visitor the city and two adjoining towns are, as they should be, one. It was in Ballarat East where the rich discoveries were first made, and the population settled. Mr. Hiscock claimed the first find in the gulley named after him, while other prospectors spread themselves northward along the ranges, and made the wonderful discoveries at Golden Point. From that day the news of the marvellous finds spread rapidly throughout the small population of the colony—at that time about 70,000 people—and from there all over the world. Southward from the Golden Point to Buninyong—a distance of about 9 miles—are the schistose ranges known as the Canadian and White Horse ranges. This is termed the backbone of the auriferous wealth of Ballarat; while about a mile to the north rises abruptly the Black Hill, and the ranges continuing to Creswick about 10 to 12 miles, so that for a distance of 20 miles there is a wide belt of auriferous country ribbed with quartz lodes of a payable character, more or less, and which have only been very partially developed as yet. To the eastward of these ranges is the great amphitheatre that formed the scene of operations of the early workings of the alluvial gold miners of Ballarat. From the Black Hill east to Mount Warrenhiep, thence south to Mount Buninyong and the Green Hill, the surface drainage of the present day, as also the series of underground river beds or gutters of former ages, containing rich alluvial deposits, wended their way westward or northward till junctioning in a wide spread of wash in the Gum Tree Flat, now the centre of the town of Ballarat East. The alluvial washes have long since been worked out, leaving only the quartz lodes to be developed, which is being moderately done, but not to the extent the well-known character of these lodes merit. When the various leads of gold or gutters, as they were termed then, were in full work, it was a time of exciting interest. No town had been surveyed, but diggers and storekeepers settled or pitched their tents where their fancy led them, but generally along some track or dray road. In the early fifties this was the great centre of the Ballarat rich gold productions which created a furore throughout the world. The concentrated leads of gold from within the great amphitheatre passed westward under the extensive layers of basalt on what was then known as the great plateau of Ballarat West and Sebastopol. The main channel known as the Gravel Pits lead passed under the Post Office at the corner of Sturt and Lydiard Streets, then crossed Sturt-street southward under the Town Hall and thence in a tortuous southerly course junctioning with the Golden Point lead, which name it retained thence, still maintaining a southerly course for many miles in its sinuosities and turnings to pick up the leads or tributaries running off the western slopes of the high schistose ranges in Ballarat East, and other then unknown tributaries to the westward, until it passed through the Buninyong estate.

In no part of the world in which I have been, or of which I have read, have I seen or heard of such a natural and splendid conformation of country as the amphitheatre of Ballarat East gave for the concentration of all the gutters or leads thrown off from the surrounding ranges, and forming a junction as it did in the flat on which is built the chief portion of the town of Ballarat East. This ground was mostly all worked by hand-labour: claims 24 feet by 24 feet square, ranging from a few feet to 180 feet in depth, eight men to a party, working 12 hours on and 12 off, four in each shift; except when the mine was being blocked out some extra wages men would be employed to help the owners. From £500 to £3000 per man was about the general run of returns from the best portions of this rich patch of alluvial deposits.

These were the halcyon days of Ballarat, before joint-stock companies were in vogue, when houses were mostly of canvas or wood, when every man considered himself as good or better than his neighbour, dress-coats and bell-toppers unknown, plenty to eat and plenty to drink, and gold plentiful—yet all were not happy.

A discontented feeling had been existing for some time in consequence of the high charges for licenses to dig for gold, and the arbitrary manner in which the collection of the fees was enforced. This was prior to the time I arrived on Ballarat as a youth, in the latter part of 1854. The fight between the troops and the armed diggers took place on Sunday morning, December 3, 1854, at the celebrated Eureka stockade, where now stands a stone pillar to commemorate the untoward event.

The charge for licenses to dig for gold was at first 30s. per month, afterwards reduced to 30s. for three months, but that was too high. The Government officials and police used to have occasional field-days, or battues, to hunt for licenses amongst the busy diggers who were intent on their work. When a batch of unfortunates who did not possess the precious document had been collected they were marched off to camp to be fined or locked up. This method of harassing large bodies of industrious men became unbearable, and the diggers were goaded into a rebellion which led to the serious collision with the Government troops and a sacrifice of numerous lives on both sides.

After the fight at the Eureka stockade numerous prisoners were arrested and tried for high treason, but were ultimately all acquitted. The first political cyclone having blown over, the calmer reasoning faculties of the public prevailed; the differences between the diggers and the Government of the day became adjusted, and the development of the gold field went on with much energy. The comparatively easy-worked or shallow leads of the east changed into a deep and expensive system of mining on the western plateau, and the difficulties of getting the gold became more serious. Larger co-operative companies had to be organised, and ultimately joint-stock companies, under the Limited or No-Liability Acts, were formed to carry on the work of costly developments.

Taking the Ballarat field, it might be said that the main portions of the alluvial leads of auriferous gravels are extracted, and the future of profitable mining must depend upon its quartz lodes, which are numerous, and are found to traverse the field for many miles in length north and south, while the width of the belt of lodes has been proved between 3 and 4 miles. The central belt running from the Black Hill to Buninyong along the ranges has been worked successfully for years past, and numerous mining companies are now in steady and profitable work, with room for many more mines to be set into steady employment.

On this line are situate the Black Hill Mine, the Sulieman Pasha, the Queen, the Victoria, the Britannia United, the Eastern Star, the Last Chance, the Llanberis, 1 2 3, the Speedwell, North Waah Hawp, South Waah Hawp, Prince Regent, North Prince Regent, New Normanby, Canton, Golden Gate, Dalziel and Buchanan, Little's, Pearce and Wynne, Tower Hill, Rothschild, Imperial, One and All, Buninyong Estate, and various others working at depths varying from 300 to about 850 feet.

It would be well if some judicious combinations were effected with some of the mines along this line of reef to justify the sinking of several shafts (say) at a mile apart to a depth of 2000 feet or more, and initiate a thorough system of cross-cutting at every 100 feet through the country. If some of the companies were to combine their forces, and start some large main central shafts with this object in view, it would at once be beneficial to themselves and the district. There are some companies that have been plodding away steadily for the past 30 years or more, but have done little or no development below 400 feet. They have been content to work mostly with tribute parties, making steady profits, with small effort, while the mines have justified more energetic work.

Thus, in the centre of Ballarat East, there is a group of mines that it would be highly advantageous to put together under one organisation—say, the Britannia United, Last Chance, Llanberis (three companies) and one or two intervening ones, that would form a splendid combination. Put down one main central shaft (say) to 2000 feet right away, with powerful pumping and winding plants. The Indicator lode runs through the centre of the group, and, along its course, there are occasionally some very rich patches of gold, and big makes of flat veins or reefs. The general average of the ore may be taken at about 8 dwts. per ton, which, under economic management, would give fully 50 per cent. of the gross yield as profit, probably more. I take this special group to demonstrate the value of a combination for harmonious working under one management, instead of half-a-dozen managements, when each company is averse to going deeper than its neighbour for fear of draining a little extra water. And so for the want of unity in this group of mines years of precious time have been lost that cannot be regained, besides vast wealth that could have been turned to good account.

It is not creditable to Ballarat skill and enterprise (which have been so well displayed all over Australia) that they have so sadly neglected the valuable quartz reefs in their own place. Immediately after the alluvial deposits had become worked out more energy should have been devoted to the quartz formations. It is being gradually done, but not to the extent the excellent prospects of the district really justify. Knowing the place so well, I can point out now, as I have long ago, the mistakes that have been made, and are still perpetuated.

SUTHERLAND REEF.—Extract from mine letter, dated April 18:—In the bottom (310 feet) level there is a very strong body of rich quartz for about 60 feet from the shaft; beyond that the ground to the west as far as we have driven is poor, but some stringers of quartz are now coming in to the reef in the face.—Winze No. 2, 210 feet level W. We are now about to proceed with sinking this as soon as the water is hauled out, and we shall continue the drives on the bottom level to meet the winze when it is down. We also propose to sink a winze west of the main shaft to a depth of 80 or 100 feet below the 310 feet level. The formation at the 310 feet level is less disturbed, and there is no doubt it must be our object to get down as quickly as possible.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

AMANA (Wentworth).—The following cablegram has been received from Mr. Warnford Lock, the company's superintendent at the mine: "Total amount crushed is 338 tons Have cleaned up and obtained 20 ounces of free gold. Alluvial deposits too unprofitable to work. Have shut down everything. Am writing you fully."

ASSOCIATED GOLD MINES OF WESTERN AUSTRALIA.—The directors have received from their attorney on the property the following cable message:—"Water trust finished; success." This indicates that the water trust formed by the Associated Gold Mines of Western Australia in conjunction with the Great Boulder, the Lake View, and the Ivanhoe Companies is an accomplished fact, and there is now an abundance of water.

BAYLEY'S REWARD CLAIM.—The following cable, dated the 17th instant, has been received by this company's London office from its head office at Melbourne: "The lode in the lower level 5 feet 6½ inches—width not yet determined. It contains a rich streak of gold ore.

BRILLIANT BLOCK.—The directors have received the following cablegram from the head office in Charters Towers:—"Have crushed during the month 2390 tons of quartz for 2511 ounces of gold. The profit on the run is £4500." The approximate value of this return is £8650.

BREMNAES GOLD.—The manager cables undes date 16th May:—"Section 4. 400 north, quartz 2 feet wide, increasing; well mineralised. Same applies to 300 north and south, and 200 north. Mine looking well. Section 5 (new property) unwatered. Blasting holes to assay for value every 6 feet in shaft. Reporting fully when completed. Fladenaes workings apparently on same lode as section 4. Am informed good lode in crosscut showing gold."

BROKEN HILL PROPRIETARY.—The manager reports that for the week ending the 16th inst. 7320 tons of ore were treated, yielding 537 tons of lead, containing 203,129 ounces silver, also 1897 tons treated by amalgamating and leaching plants, producing 21,897 ounces silver. The price of the shares in Melbourne is £2 5s. buyers.

BIG BLOW.—The following cablegram has been received from the mines:—"No. 1 shaft full of water, reef proved to a depth of 180 feet. Have driven crosscut at the bottom of the shaft, reef 15 feet wide, and assays an average of 2 ounces per ton; the workings are most encouraging. Completed foundations for the mill."

BONNIE DUNDEE.—The directors have received the following cablegram from Charters Towers:—"The underlie (new No. 3 shaft) has reached a depth of 90 feet. Have crushed 61 tons of quartz for a yield of 75 ounces of gold."

BRILLIANT AND ST. GEORGE UNITED.—The directors have received the following cablegram from the directors in Charters Towns:—"Have crushed during the month 1270 tons of quartz for 1906 ounces of gold. Have declared a dividend of 6d. per share payable on Wednesday, the 22nd inst."

BUFFELSDOORN ESTATE.—A cablegram from the mine states:—"Production for April, 4326 ounces. Milling delayed. Have commenced erecting machinery. Developments promise well."

CALEDONIAN.—The following cable has been received from the manager of the mine:—"The mine looks splendid, showing some very fine specimens which are exceedingly rich in gold. Your property is one of the best in the district."

COETZEESTROM, May 17.—The board of this company has just received the result of an assay of samples of ore from one of the reefs on their property, named Thomas's reef, showing a yield of over 15 dwts. per ton.

CASSEL COLLIERY.—A cablegram received by the directors gives the output for the month of April as 18,450 tons; profit, £3800.

CONSOLIDATED MURCHISON.—The following cablegram has been received from the mine:—"Crushings 410 tons 311 ounces beside tailings."

CROWN REEF.—Total profit for April, £10,726.

EASTLEIGH MINE.—"April returns: 50 stamps running 30 days, yielded 2354 ounces."

ELKHORN.—Bullion produced in the mill for the week ending May 11, 10,000 ounces.

EL CALLAO.—Messrs. Baring Brothers and Company (Limited) have received the following telegram from the El Callao Gold Mining Company:—201—225 ounces of gold in bars produced by El Callao Mine for past fortnight; 776—800 ounces by the Colombia Mine."

GELDENHUIS ESTATE AND GOLD.—Copy of cablegram received from head office, Johannesburg. "Last months (April) profit was £5,300."

GOLDEN CROWN.—The following cablegram has been received from the solicitors at Perth, Western Australia:—"Titles to property are perfect; registered in the name of Golden Crown (Limited)."

GREAT BOULDER PROPRIETARY.—A cablegram from the manager, Mr. Zebina Lane, states:—"Water supply scheme—Everything completely finished. It has been a great success; there is a good supply of water."

HANNAN'S BROWNHILL.—The following telegram was received from Kalgoorlie on May 13:—"Shaft has reached a depth of 180 ft, down to the water level. Mine is looking well."

HAURAKI.—The directors have received the following information from the manager:—"Have cut a vein in the 160 level running east and west, dipping north, full of visible free gold. Will have to go on further 25 feet to intersect No. 2.

HOLCOMB VALLEY.—The secretary reports the receipt of a cablegram from the manager, of which the following is an extract:—"Hand-sluicing stopped on account of starting shovel. We cannot work both together. Sluicing done so as to prove the value of gravel on Vulture claim. By hand-washing I obtained 340 dwts of gold from 160 cubic yards of gravel. Value approximately per cubic yard, $2. Shovel now hard at work. Pumping machinery and pipe line finished." In a further cablegram the manager says:—"Have received your cable dated 13th. Shovel making first cut 500 yards. Amalgamator cannot start until we have finished. Have mailed full particulars on 2nd day of May."

KANGARILLA SILVER.—Per cable 16th inst.—*re* French-Stewart process. "Roasting proceeding—Crushing commenced."

KINTORE.—Mr. Gray, the engineer to the mines, writes to the directors that, upon survey, it has been found that the property embraces an area of 39 acres, being three acres more than stated by the vendors.

LAKE VIEW.—Mr. George Brookman, Chairman of the Lake View Gold Mining Company, who is now in London, has received the following cablegram from the Lake View Mine at Hannan's:—"Crushed 142 tons; result, 463 ounces smelted gold."

MAY CONSOLIDATED.—The following cable message dated Johannesburg, May 9, has been received at the office:—"The profit for the past month (April) was £3700."

MOUNT CHARLOTTE.—A cablegram from the manager states:—"We have struck good gold Murray's West Drift."

MOODIE'S.—The following are the returns from the company's property for the month of April:—"Claims rented or leased from the company, 289 ounces; number of tons crushed by claimholders, 960 ounce; yield of gold from claimholders, 670 ounces."

MOUNT MORGAN (Queensland).—Results for the month of April:—Tons chlorinated, 7353. Gold returned 11,513 ounces.

MOUNT LEYSHON.—Fortnightly crushing:—1700 tons crushed, 218 ounces gold. 40-stamp mill ran 12 days; loss, £65. The cablegram:—"We are now crushing better ore."

MURCHISON NEW CHUM.—The following cable news has been received from Mr. Forrest, the local chairman:—"New Chum—cleaned up—10th May. The clean-up yielded 1475 ounces retorted gold. The mill ran seven days. 110 tons crushed. Developments opening up splendidly." A further cablegram was received from Mr. Forrest as follows:—"Estimated profit to May 31, £14,000."

NEW CHIMES.—Last month's profit was £5160

NEW GUSTON.—Mr. F. P. Crowther (director), who is now on a visit to the mine, has cabled, conjointly with Captain Harvey, to the following effect:—"Shipping as rapidly as possible. After making a most thorough examination, our opinion is the mine is looking well throughout. In good condition to make shipments. There is two years' ore supply in sight. Have discovered good ore No. 12 level raise, 18 feet over back of level. First-class peacock ore 5 feet thick, ¾ ounce to 2 ounces of gold per ton, 92 ounces to 150 ounces of silver per ton, and 30 to 45 per cent. copper; next 11 feet 6 inches, yellow copper, grey copper, 6 dwt. of gold per ton, 14 ounces to 45 ounces of silver per ton, and 8 to 16 per cent. copper intermixed with usual grade iron pyrites." With regard to the Silverton smelter, Mr. Crowther cables that the smelter started in full work on May 14.

NEW QUEEN.—The directors have received the following cablegram, dated Charters Towers, May 11, giving result of crushing for past fortnight:—"255 tons yielding 475 ounces gold. Have drawn upon you £1000. Shipped per s.s. *Duke of Sutherland* 928 ounces."

NEW LOUIS D'OR (MAIN REEF).—The following cablegram has been received from the company's manager at the mines:—"Good progress is being made with the erection of the machinery."

NEW ST. AUGUSTINE.—A cablegram from the mine states:—2000 loads yielded 118 carats."

NEW KLEINFONTEIN.—The Anglo-French Exploration Company (Limited), as the London agents for the New Kleinfontein Company (Limited), have received the following information from Johannesburg:—"The result of the crushing for the month of April amounted to 2020 ounces from the mill, and 689 ounces treatment of the tailings, making a total of 2709 ounces. The number of tons developed was 6270. Last month (March) the total number of ounces was 2608, and the tons developed 8030."

OURO PRETO.—This company has received a cablegram from the mines, giving the return for the month of April as follows:—"3835 tons produced 46,742 grammes = 1503 ounces."

ROTHERY BLOCK.—A cablegram from the mine states:—"Sunk 10 feet on the vein; looks very favourable; having assays made."

SALISBURY REEF.—The following cablegram has been received from Mr. Susman, the managing director at Salisbury:—"Have obtained Alford's report with plans and section. Is most satisfactory. It is too long to cable fully. The concluding part of it reads:—'The working facilities of this property in every respect are so exceptionally good that with properly laid-out mine and economical working 8 dwts of rock ought to pay and yield satisfactory profit and results. Sampling shows that this value will probably be very considerably exceeded at a number of points, and the geological features of ground leave little doubt of continuity of veins in depths."

SAM'S WEALTH OF NATIONS.—The following cablegram has been received from the superintendent of the company's Plutus Consolidated Mines:—"There are indications of improvement."

SHEBA.—The directors have received the following cablegram from the general manager:—"Running about 20 stamps."

ST. JOHN DEL REY.—The following telegram has been received from Mr. Chalmers:—"Produce 10 days, first division May, 9500 oitavas, equal to 1095 ounces troy; value £3682. Yield per ton 6·7 oitavas (·7722 ounce troy).

SIERRA BUTTES.—Result of the working at the company's mines for April:—Sierra Buttes Mine—Total receipts, $2519 = £504; total working expenses, $1797 = £359. Plumas Eureka Mine—Total receipts, $4947 = £989; total working expenses, $3450 = £690. Uncle Sam Mine—Total receipts, $13,504 = £2701; total working expenses, £7783 = £1557.

SIMMER AND JACK.—Last month's profit was £10,000.

TRANSVAAL COAL TRUST.—The following is copy of a cablegram which has been received from the Transvaal Coal Trust Company (Limited), at Johannesburg, with reference to that company's operations for the month of April:—"Output 26,800 tons. Profit, £4200."

TRANSVAAL GOLD EXPLORATION AND LAND.—The directors have received the following cable from the general manager:—"Estimated value of bullion recovered during March £7650. Working expenses for month £5020."

UNITED AFRICAN LANDS.—The company's manager in South Africa, under date April 11, reports as follows:—"The output from the mine for the month of March was 2138 bags, and 10 tons of steam coal have been dispatched to Delagoa Bay as a sample."

UNITED MEXICAN.—San Cayetano—Gross returns for week ended May 4, $670; expenses, $1220; loss, $550. El Cubo—Gross returns for week ended May 4, $6950; expenses, $5046; profit, $1904.

VICTORY.—Messrs. A. Durant and Co., the London agents, have received the following cablegram from the head office in Sydney:—"Crushing (for the fortnight) from No. 2 shaft, 130 tons for 150 ounces of gold."

WEMMER.—The directors have received the following cable:—"The net profit from operations last month is £9116."

WESTLEIGH.—A cablegram from Johannesburg states:—"The transfer of the property has been completed."

WORCESTER EXPLORATION.—Details of working for March:—Tons milled, 2049; stamps working, 20; number of days mill ran, 29½; yield from plates, 1714 ounces of gold; yield of bullion from cyanide works, 315 ounces; nett profit for month, £3325 10s. 5d.

WENTWORTH GOLD FIELDS.—The following cablegram has been received from the mines:—"Four weeks' crushing: 720 tons of ore have been washed yielding 2500 ounces of gold. There has been no shipment of refractory ore since our last report, all the ore having been treated here. The ore is giving out in the Phœnix Mine 500 feet level. We have not yet found payable ore in the Phœnix Mine 600 feet level."

WHITE FEATHER REWARD CLAIM.—The following cablegram has been received:—"Rich quartz came up yesterday from drive running south from main shaft, reef making stronger"

WITWATERSRAND GOLD MINING.—The directors have received the following cable from Johannesburg, relative to the interdict placed on the issue of the 50,000 shares:—"Interdict upheld. Notice of appeal has been given."

CORRESPONDENCE.

*** We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.*

CORNISH TIN MINING.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—This industry has been, as is well-known, suffering from great depression, in common with all other industries, for the past two or three years. It is important, however, to notice that it is reviving, not alone, but along with every other industry. In the past the demand for iron has, as a rule, always led the way; but now the demand for iron, tin, and copper has come at one time along with a general improvement in business. Even the small shopkeepers in London will tell one that things are better than they were. The important revival in foreign mining is exceedingly important, and in this particular instance promises to have permanent and most beneficial results. The discovery of gold is always an important factor, particularly so; but when the discovery is in such large quantities as is now evident, it becomes all the more satisfactory for the world in general. Looking at all the circumstances of the case, it may not, therefore, be an over-sanguine expectation to calculate on such a revival of home mining as we have never known. Now that Cornwall is willing to lead the way by the adoption of the Limited Liability principle, with all proper safeguards necessary for the honest and judicious conduct of the business, it is quite certain that there will be a great demand for Cornish mine shares; in fact, the demand may be said to have already commenced, but the unfortunate circumstance is that shareholders have allowed their shares to be unduly depressed, so that quotations cannot now be relied upon, and, therefore, too much must not be made of the reported improvements in prices, the fact being that it may be questioned whether prices have ever fallen so low as has been believed. For instance, in the leading London Cornish offices, it is well known that buyers are coming forward, but only for shares at quoted prices. They cannot be supplied, and, in fact, the orders are ignored; the limits will have to be raised in some instances—in cases of low-priced shares something like 100 per cent.—before the orders are worth a moment's attention.—Yours truly, J. B. REYNOLDS.

37, *Walbrook, E.C.*

COMPANIES AND LEGAL ANNOUNCEMENTS.

*** Advertisements are inserted in this column at the rate o 9d. per line with a minimum charge of 7s. 6d.

MASON AND BARRY (LIMITED).

SAN DOMINGOS MINE, PORTUGAL.

DIVIDEND.

NOTICE IS HEREBY GIVEN, that a DIVIDEND for the year ending 31st December, 1894, at the rate of TWO SHILLINGS AND SIXPENCE PER SHARE, free of income-tax, was declared at the Ordinary General Meeting held this day, the same being PAYABLE on and after THURSDAY, the 23rd inst., at the Offices of the Company, 87, Cannon Street, London, E.C.

The holders of "Share Warrants to Bearer" must leave Coupons (Series No. 3) for examination four days previous to payment, between the hours of Eleven and Two, on any day except Saturday.

Coupons may be presented after to-day, and must be listed on the Company's printed form, obtainable at the Company's office.

By Order,
JOHN G. BARRY, F.C.A. Secretary.

Offices of the Company: 87, Cannon Street, London, E.C.,
May 13th, 1895.

AMALGAMATOR ASSISTANT required immediately, for Gold Mine in West Africa. Must have had good experience. Apply, by letter (enclosing copies of testimonials and references), to "Z, 969," at SHELLEY'S Advertising Offices, 38, Gracechurch Street, E.C.

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JACOB H. NEFF, President California Miners' Association.
P. N. LILIENTHAL, Manager Anglo-California Bank (Limited).
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D. M. BURNS, Capitalist.
R. C. CHAMBERS, Manager Ontario Mine, Utah.
WILLIAM C. RALSTON, Secretary (Secretary California Miners Association).
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THIS COMPANY sells Mines, Mining Claims, Ditch Properties, and Water Rights ON COMMISSION, and will act as Agent and Broker for the Sale and Purchase of such Properties.
It is intended to conduct the Purchase and Sale of Mining Claims, Ditch Properties, and Water Rights on the same basis as a real estate transaction.
The Company is prohibited by its Articles of Incorporation from buying or selling on its own behalf, or except upon commission, or as agent or factor for others.
The buyer pays no fees whatever, and there is no incentive to advance the price beyond the original figures at which the price and commission have been agreed upon with the seller.
It is not intended only to negotiate the sale of an entire property but interests in such may be sold or money obtained for development work.
This Company especially solicits the business of making reports or examinations for non-resident mine owners on any of their mines in the United States, and obtaining special information as to their condition and so forth (said reports being confidential).
Those who conduct the business of the Company have had long experience in mining operations, and it is their intention to place the Company in a position to inspire the confidence of all who seek its assistance in its integrity and fair dealing.
We respectfully refer to any Bank in the City of San Francisco and to the Anglo-Californian Bank (Limited), London, as to the standing of the Board of Directors of this Company.
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RAILWAY AND COMMERCIAL GAZETTE:
An Illustrated Record of Mining, Metallurgical, Railway, Financial, Industrial, and Engineering Progress.

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LONDON: MAY 18, 1895.

DEEP LEVEL MINING ON THE RAND.—II.

So far, we have been dealing merely with depth in the abstract; now it becomes necessary to consider the effect upon mining of its inevitable concomitants—increase of atmospheric pressure and of temperature, the important question of ventilation being indissolubly bound up with these. As Johannesburg lies 5735 feet above sea level, the air at the bottom of a shaft 5000 feet deep will only be under about normal pressure, and even 5000 feet lower, the pressure would not be a quarter of that under which men mine without any serious inconvenience in the Triger system of shaft sinking by compressed air. Any objections to Deep Level mines that may be suggested on the score of atmospheric pressure may, therefore, be at once summarily dismissed as illusory. This is not, however, the case with the difficulties caused by increased temperature. There can be little or no doubt but that temperature does increase as we descend into the earth, it being generally stated that this increase is at the rate of 1° Fahr. for each increment of 65 to 75 feet. Mr. HAMILTON SMITH puts it at 1° Fahr. for every 80 feet on the Rand. Assuming this figure to be correct, it would mean an increase of 100° Fahr. for a depth of 8000 feet. In the lower levels of the Comstock, at 3300 feet below the surface, work is carried on at a temperature of 170° Fahr., and there is no reason why the same should not be done on the Rand in case of need. It is, however, by no means so sure that, in the first place, temperature does continue to increase uniformly as depth is gained; indeed Sir CHARLES LYELL argued very conclusively against this view. We have just mentioned the temperature on the Comstock lode; but in still deeper mines in other parts of the world, no such high temperatures have been met with, and in the very deepest mines in the true sense of the word—that is to say, in those that have advanced the most towards the centre of the earth—no inconvenience whatever from elevated temperature has been found to occur. Moreover, it is quite impossible to expect anything like uniformity in this respect in different parts of the world. Even admitting that there are huge reservoirs of molten matter in the interior of the earth, the rocky crust is a very bad conductor of heat, and local influences such as the presence of readily oxidisable constituents in a given stratum, or its proximity to such sources of heat as hot springs or similar volcanic manifestations, are likely to have a far greater effect upon the temperature of that stratum than the fact that it lies a mile or two nearer to, or further from, the centre of the earth. We are not, therefore, justified in drawing any too stringent conclusions as to the probable temperatures that would be met with in deep mining. On the other hand, we are justified in saying that they are most unlikely to be such as cannot readily be coped with by the resources of engineering science, and it will at once occur to everyone that by using air under high pressure as a means of underground ventilation, we should have in the expansion of this air a source of cold that would probably prove quite sufficient to overcome this difficulty. This last suggestion brings us to the subject of ventilation. With very deep shafts, such as we are now considering, and with an extensive series of levels and workings, natural ventilation would probably not by itself prove sufficient, unless powerfully aided by subterraneous heat. Upon the whole it is probable that artificial ventilation will have to be resorted to, as has to be done in so very many collieries. It is a simple enough matter, and offers no difficulties whatever, except in so far as it adds to the working expenses of the mine. Here, again, we have the comforting reflection that a Witwatersrand gold mine can surely stand as much current expense as an ordinary colliery, having regard to the comparative values of the minerals respectively produced by each. At any rate from the technical point of view, the difficulty is *nil*.

We have now examined somewhat in detail what engineering difficulties would probably be encountered in working a mine at an extreme depth, far beyond anything that is likely to trouble the present generation, at any rate, and we are bound to admit that the engineer cannot recognise anywhere any insuperable obstacles. Difficulties, of course, there are, but in spite of them we are forced to the conclusion that, in the present state of engineering science, there is no depth within reason than can fairly be regarded as the maximum limit below which mining is technically impossible.

Let us turn now to the financial aspect of the matter. The first point to enquire into is what the extra cost is likely to be of operating a Deep Level mine as compared with one on the outcrop. In investigating the physical possibility of working, we referred everything to a depth beyond the extreme that is ever likely to be required, in order to be on the safe side, just like every sensible engineer designs all his machinery with a very large factor of safety. Having proved that mining at such a depth is practically possible, it follows, *a fortiori*, that a lower depth presents still fewer difficulties. But now taking the business man's point of view, we shall do better to take a case within the potential limit of present possibilities. Let us, therefore, endeavour to arrive at the additional cost of operating a mine at a depth of 5000 feet; and it may be well to remember in this connection that a shaft depth of 1000 feet, taking the dip of the Rand beds at 30° to the horizontal, corresponds to a horizontal distance of 2000 feet, or five claims to the deep. Calculating a claim at this depth to contain 25,000 tons of workable ore, which is by no means an exaggerated estimate, 1000 feet of depth in a shaft will then correspond to 1¼ million tons of ore for each claim along the strike. This will give an idea of the potential results that are represented by a 5000 feet shaft. The costs of ore conveyance on the surface, and of ore treatment in the mill, &c., do not, of course, differ in the case of a Deep Level mine from what they are in a shallow one, except in so far as the operations will be cheapened by the treatment of very large quantities within a compact area. With the advances already realised, and daily being realised in the metallurgical treatment of pyritic ores, the question of the greater or less proportion of free gold that may be found in depth need not trouble us. Indeed, there are not wanting engineers who consider that it might prove an actual advantage if none of the gold at all were free. From a depth of 5000 feet each shaft ought readily to raise from 1500 to 2000 tons per day, and there is no reason why even this latter figure should not be exceeded. This means that each deep shaft could keep 400 or 500 heads of stamps supplied with ore, and by working on so enormous a scale, operations would naturally be cheapened. The actual cost of hoisting, of pumping, and of driving the ventilator are almost the only items of importance that need accordingly to be considered at all in detail, and these obviously depend very largely upon the cost of coal. There is every indication that as the collieries of the Transvaal are opened out, and by the very fact of larger supplies of coal being required, the cost of this all-important item will fall considerably below its present high price of some 30s. per ton. As regards the consumption of coal in hoisting ore, we may refer to the careful experiments that have been made in English mines. Thus at the Blackwell Colliery in Derbyshire, it was found that a ton of coal could be hoisted 720

feet with a consumption of 21½ lbs. of coal. This was done with an hoisting engine of the ordinary type of 341 horse-power effective, which hoists its load through the 720 feet in 30 seconds, including starting and stopping. At the Stanton Colliery, where 80 tons of coal are hoisted per hour from a depth of 750 feet by a 200 indicated horse-power winding engine, the consumption of coal is 30 lbs. per ton hoisted, the rope not being counterbalanced, and the engine being by no means a first-rate one, consuming 10 lbs. of coal per indicated horse-power per hour. In both these cases ordinary slack is the fuel used. Making all due allowance for the inferiority of Transvaal coal, the former figure would work out to a consumption of (say) 1¼ cwt. of coal for each ton hoisted 5000 feet. Or, to look at the matter in another way, so as to get a fair conception of the economies produced by working on a big scale. As was pointed out in our first article on the technical aspect of deep winding, an engine that will lift 2 tons at a rate of 3000 feet per minute, will need to be of about 1200 horse-power effective. Allowing a consumpof 6 lbs. of Transvaal coal per I. H. P. per hour, and calculating that, at the above rate of working, 1500 tons will be hoisted in 24 hours, this works out to little over 1 cwt. of coal per ton of ore hoisted. Even at the present high price of coal, therefore, the cost of the fuel needed to hoist a ton of ore 5000 feet would only be about 1s. 6d. to 2s. The cost at the Stanton Colliery, where fuel is, of course, cheap, is only 0·5d. per ton of coal lifted 750 feet. The other great expense is hoisting is that due to the renewal of the rope; and this is a serious item, because it increases more rapidly than does that of fuel as depth is gained. The life of a rope, as expressed in tons hoisted by it, varies within the very widest limits, a rope hoisting from 50,000 to some millions of tons according to circumstances. Supposing a rope for a 5000 feet shaft to cost £1000, and to be capable of hoisting 100,000 tons, the wear and tear of the rope would only be about 2·5d. per ton hoisted. In the Stanton Colliery this item amounts to 0·06d. per ton of coal raised. The above are the two most important items in which the cost of deep winding will be largely augmented, as compared with hoisting in shallow shafts.

As regards the cost of pumping, this obviously depends almost entirely upon the amount of water that will be met with in depth. A good Cornish engine has lifted over 100 millions of pounds of water a foot high with the consumption of 1 cwt. of fuel. Calculating upon only a quarter of this duty, each cwt. of coal burnt would raise 5000 lbs. of water, or 500 gallons, to the height of 5000 feet. Obviously, therefore, it would need a very heavy influx of water to raise the cost of fuel for pumping to anything like a formidable item. Similarly, but little fuel would be required to drive a ventilator, although it is impossible to say beforehand what the amount might be. Probably the economies that could be introduced into mining proper at great depths when handling very great quantities would fully compensate for the increased cost of maintenance of the shaft, whilst mine maintenance would decrease. So it seems fair enough to hazard the opinion that, working at a depth of 5000 feet, the cost of delivering ore at the surface should not exceed that of similarly getting it from shallow mines by more than some three or four shillings. At present the cost of mining proper on the Rand averages about 13s. per ton, and mine maintenance about 4s.; it is reasonable to hope that these items in a mine 5000 feet deep would not together exceed a total cost of about £1 per ton, and no one acquainted with the Rand would consider this at all a prohibitive figure.

We now have to consider the important question of capital. We will disregard the cost of surface works, mills, reduction works, &c., which are the same for deep as for outcrop mines, and look only into the question of the additional capital required for a Deep Level shaft. Such a shaft should be sunk and fully equipped for about £40 or £50 per foot. Seeing that two shafts will be required for each mine, their cost would thus be some £500,000. Moreover, a large amount of underground driving will have to be done in order to open up a sufficiency of ground to keep the shafts fully occupied, so that a capital of a million sterling may be considered the minimum with which a Deep Level mine could be started. This is a large sum, though not a prohibitive one. A more serious matter is the length of time that must elapse before the mine could become remunerative. A speed of 50 feet a month is all that could be reckoned on in sinking and securing such a shaft, so that it would take over nine years before it reached the depth of 5000 feet, and it would scarcely be possible to complete the necessary levels in less than another three, so that dead work would occupy at least a dozen years, over which, however, the above capital outlay would, of course, be spread. Here, then, we see an advantage to be gained by the amalgamation of Deep Level with outcrop properties; the latter might be earning dividends, a portion of which could be applied to the development of the Deep Levels, and thus the necessity of a large amount of capital being sunk for so many years be avoided. Another consideration, obviously of great importance in this respect, is the location of the shafts. Technically speaking, they are best sunk to the deep of the block of ground which they are intended to exploit; if, however, a Deep Level company already possessed shafts sunk in such a position down to (say) 4000 feet, it would be cheaper and probably more advantageous to sink these shafts another 1000 feet, and then drive crosscuts from their bottom 2000 feet in length, so as to intersect the banket beds at 5000 feet depth, rather than to commence new shafts, in the technically-speaking, correct position. Inclined shafts are probably out of the question at such great depths, when dealing with such flat dips as those of the Rand formation. Similarly it might be, economically speaking, better, if a large block of ground has to be developed, to sink the shafts not to the deep but in the centre of the block, continuing through the banket bed to the full depth of its lower edge, in order to be able to commence getting gold at an earlier day, even though the lower half of the block had to be worked under rather less advantageous circumstances, and at a slightly increased cost owing to the extra underground haulage.

These are, however, questions which, whilst of immense importance, are yet questions, more or less, of detail. The great point that needs to be emphasised is that working on the Rand at even such a depth as 5000 feet is not only possible, but has every probability of being profitable, provided that ample capital is provided at the outset, and that a sufficiently large block of ground is secured. The high cost of shaft sinking as compared to an additional mile or two of underground drivage makes it imperative that no shaft be sunk unless a sufficiently large area of mining claims can be served by it, to repay the capital sunk in its construction. The technical considerations are, comparatively speaking, simple; the financial ones present points of great difficulty and complication. Nowhere, however, do we see any obstacles of insuperable magnitude, and we cannot doubt that the energy and enterprise of the men who have created the thriving town of Johannesburg in the centre of a desert will be equal to continuing the development of the wonderful gold deposits that form its *raison d'être*, to depths that our old-world engineers have hitherto looked upon as all but prohibitive, and that even greater advances in gold mining than we have ventured to foreshadow here will be triumphantly realised.

THE RISE IN COPPER.

THE upward movement in copper values will not come as a surprise to those who have been following the tendency of the market for some time past. It is evident that the relative position of prices to statistics has long been a false one, in the sense that they have stood much below the level which the figures of supply and demand justified. Consumption has, perhaps, not increased to the extent that seemed to be warranted by the opening-up of a wider scope for the employment of the metal; but while many new branches of industry—and especially the electrical engineering trades—have afforded fresh channels for the utilisation of copper, it needs very little stimulus, by a recovery in the trade position, to hasten an improvement in demand. Such as it is, the increase in consumption has been much in excess of the supplies coming to the European markets. With prices steadily declining, the American copper producers have been compelled to minimise their losses by reducing the output of metal, though not sufficiently to have any perceptible influence upon the tone of the market. The visible supplies have thus been kept within fairly reasonable limits, and have sometimes fallen to a point that gave every hope of an early advance in prices. But what is of greater moment is that the amount of copper in the hands of merchants and consumers is now much smaller than it has been for some years past. Since the collapse of the copper "ring," the market has been lying under the incubus of secret stocks that could not fail, if thrown upon the market, to check any tendency to an advance in quotations. One after another these holders have hastened to get rid of their reserves rather than keep them in the vain hope of selling them at higher prices, and the recent sales effected by Baron HIRSCH have removed one of the last stumbling-blocks to an improvement in copper. If any further supplies remain in the hands of speculators, they must be too small to weigh seriously upon any legitimate strengthening of the market. To this extent, therefore, the outlook is much brighter than it has been for a long time past. The way is now open for a natural expansion of demand, and this is likely to take place very soon. The recovery of trade in the United States and on the Continent, though as yet too slight to be counted upon as a permanent factor in the stronger tone of copper, has certainly for the moment resulted in a larger consumption of the metal. This upward movement is now to be assisted by the proposal among the American producer to restrict the exports of copper to 60,000 tons a year. If this is carried out for any length of time it may have a perceptible influence upon the metal in Europe, but it is inadvisable to place too much trust in any such contingency. Combinations of this character have not been very successful in the past, nor can they be when the interests at stake are so much at variance, and any restriction of supplies from America cannot fail to be followed by larger consignments from Spain and other producing countries. However this may be, the fact that the European market is to be relieved for some time from the depressing influence of unlimited supplies from the other side has done not a little to awaken a feeling of hope in the future of copper. Still more can one see the hand of the speculator in the heavy purchases that have taken place during the past week; but this is only an incidental feature of the upward movement. It began with the replenishment of stocks by consumers who were wise enough to see that a moment of extremely low prices and an improving trade outlook was particularly favourable for the purchase of copper, and the impulse thus begun is being accentuated by others who follow their lead. Already the demand for metal during the past week has forced up prices to £44 a ton, and there is every likelihood of values advancing still further. At this figure it may not be possible for the American producers to secure any very large margin of profit, but it is sufficient, at any rate, to allow of mining operations being carried on more vigorously in Spain. The Sierra Morena group of copper mines is so rich in by-products that the companies have been paying fairly good dividends even when the price of the metal hardly compensated for its extraction, and at the present moment two or three new concerns are engaged in opening up mines under very favourable auspices. The prospects of the Spanish mines have, indeed, so far improved that the Rio Tinto and Tharsis shares have rapidly advanced during the past week, and are now finding plenty of purchasers. It is, of course, unreasonable to expect anything in the nature of a "boom" in copper shares. The sources of supply are capable of so great an extension that the amount of copper placed on the market is bound to remain in excess of the world's requirements, but so long as the disparity is not too considerable, there is little danger of prices falling below an unprofitable level, and this can only be done by producers keeping their supplies within reasonable limits. After all, it is better to secure good profits upon a small output than to burden the market with heavy stocks under the mistaken impression that larger sales at lower rates will permit of more satisfactory returns. It may be a somewhat difficult matter to devise any means for ensuring a more equal adjustment between supply and demand. The world's resources in copper are so widely distributed as to put any universal system of limitation out of the question; but, after the experience of the past twelve months or so, the producers will, no doubt, have learned the necessity of exercising a little self-restraint in the working of their mines. Another danger to be guarded against are the manœuvres of speculators who, for some years, discovered a fertile source of profit in their dealings in copper. It is to be hoped, however, that the ruinous reaction which followed upon this speculation will have deterred them from laying in considerable stocks of copper on the strength of a probable rise in values. The market possesses too much inherent weakness to permit of any risk being incurred with impunity, and now that this truth has been brought home to speculators there is not likely to be any recurrence of the collapse which took place a few years ago. For this reason there is plenty of ground for believing that the present revival of copper, while not developing to any great extent, will yet result in the establishment of prices upon a firmer and more permanent basis, and will be followed by a steady activity at mines where the high content of metal and the ease of extraction make them especially profitable. As for the other metals, there is every likelihood that the same influences of improving trade and revived enterprise, which have worked for the good of copper, will extend very shortly to tin and lead.

NOTES AND COMMENTS.

THE leaders of the mining industry in Cornwall are slowly, but certainly, beginning to recognise the necessity for a reversion from the Cost-book system to Limited Liability—a policy which we have consistently advocated for years past. Even the fondest adherent of the old order of things—and the sentiment is one that must command respect and sympathy—can no longer refuse to see the palpable drift of mining policy in the county into the newer groove. While the movement was confined to the smaller concerns, such, for instance, as the Wheal Metal and Flow, there might have been some question as to its scope and duration; but when Dolcoath, which occupies the most considerable space in the West of England mining world, goes thitherward, too, there can be no mistaking the significance and conclusiveness of the fact. It has been almost with reluctance that we have, year after year, given our decided opinion in favour of Limited Liability. Wherever old methods were found to work satisfactorily under latter-day conditions of production, our impulse has always been towards their preservation. But we have recognised early what some of the Cornish industrialists have only now reluctantly admitted, that no strength of affection for historic and accustomed modes should be allowed to stand in the way of the substantial prosperity of mining enterprises. A new era seems approaching in Cornish mining, and it might be well if those who have not yet taken the decisive step of frankly accepting the new principle of working were to do so without delay, so as to be ready when the tide of affairs again rises.

COMPARED with that of last year, the position reflected in the current report of Mason and Barry, and pointfully summarised by Mr. Ricardo in his speech from the chair at the annual meeting, is a distinct advance towards a more satisfactory condition of finances, and a more vigorous, robust condition of trade. A coincident improvement both in the outward prospects and internal condition of the company has taken place within the last year. So far as the working of the company is concerned, the chief factor to be considered is a strengthening in the price of copper that may lead to a considerable change for the better in the results of the company's operations. The general revival in trade has led to a very welcome hardening in the prices of several of the chief metals, and the greater prosperity thus reflected upon the companies producing them has fully equalled expectation. While the conditions of the company's working, regarded outwardly, are certainly improving, the internal management is in the hands of men who are constantly seeking by a prudent and cautious policy to conserve to the fullest extent the interests of the shareholders. The past year's record is a good one, and if the directors succeed in effecting a repetition of it for the current 12 months they will earn the gratitude of the shareholders, or, rather, they will increase it, for already it is theirs.

THERE is a movement amongst the leading mining men in Western Australia, consequent upon the natural disadvantage which at present retard in a great measure the successful prosecution of mining. At the latter end of March a meeting was held at Coolgardie to consider the advisability of introducing dry crushing, and the cyanide or chlorination process of extracting gold. This is certainly a step in the right direction, and it has not been taken too soon. The meeting was an enthusiastic one, and the matter has been taken up seriously. According to the *West Australian Gold Fields Courier*, the general idea is to make an attempt to test the utility of dry crushing systems either by stampers or ball mills, but few of the speakers had sufficient experience of these mills to speak with authority. Fortunately in most part of Australia there is an ample supply

in the gold-producing districts to allow stamper-mills and amalgamation to be the almost sole means adopted for the recovery of gold. An attempt is now being made on the field to test the value of dry crushing combined with amalgamation and cyanide. The experiment, of course, will be watched with great interest. The only practical outcome of the meeting was the decision that papers on various systems of milling should be prepared and read at a future gathering, whilst the result of the discussion seems to have been that the whole experience of Australia has been that the wet processes alone have been successful, and while it is desirable to experiment with methods in which less water is used, these attempts should, for the present, at least, be regarded as experiments only.

A REVOLUTIONARY leading article appears in the *Standard and Diggers' News* of April 6, the last copy to hand by mail. It is all about Charterland, and laughs at the possibility of this country ever becoming a great gold mining field. This is news, indeed; very different from what the world was dreaming of. We were all looking to Charterland as the Land of Promise; now our eyes have been opened to the real state of things. The place is but a wilderness, and not at all a land flowing with milk and honey. The "finds" of gold have all been dropped from heaven, or by birds straying from the gold mines of the Rand or Westralia. These are not the phrases employed by the writer of the article in question, but this is the ironical vein in which he has written. For instance, this is how he commences:—"The patience of the handful of men at present in Charterland is magnificent and something to be admired and marvelled at. The seasons come and go, and years pass by, and "finds" are made and reported, syndicates struggle on, stands are sold and abandoned, and still the country does not forge ahead, still the progress made is inappreciable, and the prospect of prosperity grows gloomier. Still the faithful foolish few hope on. What life there is in the land is confined to Buluwayo, and even there the pulse of things is by no means quick, and we hear complaints of the hardness of the times, and heavy handicaps on life in the land of the slaughtered savage." Now, such a state of things was not imagined by us on this side of the water, and this is an unpleasant awakening. We are afraid, however, that the writer just a little exaggerates matters, and that he has done this with a purpose which we are unable at present to divine. What effect the article will have cannot as yet be conjectured. At any rate, it is not likely to greatly depress believers in the future of Charterland.

WE might have concluded that the writer was jealous, and that he wished to depreciate the country for the purpose of attracting greater attention to the Rand. But such a feeling cannot have influenced him, for he goes on to praise Western Australia. He is commenting upon a meeting of the Chamber of Commerce held, he says, "to consider the situation and to discover ways and means of making things march." They came to the conclusion that a railway was needed, but they could not fix upon the route. The writer goes on to say:—"It occurs to us, however, that the people of Buluwayo need hardly vex their souls about railway connection at the present juncture. While the evidences of mineral culture are so meagre and disappointing; while anything in the shape of a gold output is still conspicuous by its absence; while the whole circumstances of the country remain in their present condition of poverty and standstill, neither capitalists, companies, governments, nor individuals will be eager to furnish funds for railway purposes, or to build lines leading to nowhere, or, at any rate, to centres where the years of experiment and exploitation have failed to furnish a single golden fact. Let Charterland give tangible testimony of its mineral wealth—something more substantial than inspired reports of finds, exaggerated stories of stand sales, and chimeric accounts of gold rushes—and the railway man will not be long in linking up with the isolated parts of the Dark Continent." And this is how he concludes:—"The Land of Promise has now several years to its credit. But it is still a Land of Promise and nothing more; and, with all sympathy for the unhappy people who have 'settled' in it, we are afraid that, with the Rand and Coolgardie absorbing all the attention and money of the capitalists, investors, and speculators, the future of Charterland cannot be very bright, and that, in the absence of the promised boom, and with the failure of Charterland flotations, it must soon follow the fate of its East African sister, and be sold for an old song to the Imperial snapper-up of all such unhappy expeditions."

SHOULD the hopeful forecast of the future of Gwelo Exploration and Development Company given by the Chairman at the meeting on Thursday be subsequently realised, the shareholders will have every reason to be grateful to the directors for the manner in which they will have controlled the destinies of the enterprise. Already the negotiations with the promoters have been carried out in a manner that argues considerable tact and skill, and the hitherto happy start given to the company is a favourable augury for its career now opening. The purpose of the company's existence, as we understand it differs materially from that of the ordinary mining company, and it must be confessed that there are certain advantages accruing to a promoting company that may be looked for in vain elsewhere. Should the history of the company be cast upon lines similar to those of other undertakings of the same class, the proprietors will be able to regard their connection with it without any dissatisfaction or regret.

WHATEVER may be the temporary fluctuations of ironstone mining in Sweden, there can be no doubt that, viewed over a long period of years, that industry has shown considerable progress. A few facts as to its development are not inopportune at the present time, when the question of steel in England is *the* question of the day in metallurgical circles, and when increasing quantities of Swedish steel and iron are being imported into this country to supplement the ever augmenting output of British works. During the past 60 years the production of pig-iron in Sweden has risen from 100,000 to 700,000 tons. In the production of steel great progress has also been made of late years. That this should be so reflects great credit upon Sweden, when we consider that many obstacles have, in these latter days of keen international competition, been thrown in the way of the Swedish iron trade by the large cost of production, owing to long freightage and want of coal. The greatest quantity of those Swedish iron ores that have been worked the longest time occur within an area of 5800 square miles, which extends from the Gulf of Bothnia on the east to the district north of Lake Venern on the west. Farthest to the east of this ore region lies the Dannemora field of world-wide fame for its ores, which are from phosphorus, and in many other respects unique. North of this district are situated the iron ore deposits of Gellivara, Kirunavara, and Luossavara, which, in length of strike, thickness, and percentage of iron, are the principal iron ores of Sweden.

THE Gellivara, which is situated in Lapland, is a true mountain of iron, which is capable of supplying the present demands of the whole world, as regards the iron ore, for centuries. At Ruotivara the area is estimated at nearly 3,250,000 square feet. The percentage of iron at several of the mines in these districts amounts to 65 and 70. The Gellivara and Ruotivara mining regions afford magnificent scope for much greater mining enterprise than has been shown at present in regard to them, and there can be little doubt that the growth of the world's metallurgical needs will lead to the provision of those improved facilities of communication, in the way of roads and railways, which appear to be the main necessity for further exploiting these magnificent deposits of mineral wealth. Whatever may be the opinion entertained at present, on account of partial inaccessibility, there can be no denying that the Swedish provinces form a portion of Europe where, in the near future, a great deal more will be heard of mining enterprise and investment than has been the case in the past. We need hardly add that in the Sheffield and Midland industries, where a very excellent quality of material is required, whether for tool-making, for drawing weldless steel tubing from the solid mass, or for several other important purposes, there is no better metal in the world than the best crucible steel of Sweden, produced by the use of Swedish bar iron smelted with charcoal from Swedish magnetic iron ores. We have authentic information that some of the weldless steel tube makers of the Midlands have been relying upon Swedish steel ingots to an increasing extent just lately. Sheffield is also importing growing quantities of bar iron to convert into crucible steel at its own works.

GEM OF CUE GOLD MINE.

THE Gem of Cue Gold Mine (Limited) has been constituted with a capital of £45,000, divided into 180,000 5s. shares, for the purpose of acquiring, developing, and working the 12 acre claim known as the Gladstone, situated about two miles north-east of the township of Cue, in the Murchison district of Western Australia. Mr. Norman Whitelaw, late Superintendent of Prospecting under the Victorian Government, has examined the property, and says:—"There are few reefs in the Murchison gold field that present a more permanent and well-defined appearance than the Gladstone, and should the results of the crushing now about to take place prove satisfactory, it will establish it a valuable and lasting property for many years to come." Mr. W. Hepburn Gale, Mayor of Cue, estimates the value of the ore to be 2 ounces gold per ton, and Mr. G. Scannell, who has undertaken an independent inspection by direction of the Mines Exploitation Syndicate, remarks respecting the general character of the ore:—"I took 10 samples of ore from different parts of the workings, and got prospects from 3 dwts. to 4 ounces to the ton, by rough treatment—dolly and dish. There is a great deal fine gold in the stone impossible to save in dish panning, but I am confident your stone as tested by me will average fully 1½ ounce per ton, if treated properly by good milling. I calculate there are 1000 tons ore in sight that will yield 1½ ounce per ton." He concludes his report as follows:—"I am very pleased with the property. The formation is the same as most of the best mines on the Murchison. The strike of lode is very regular and increasing in size as sunk on. The ground is easily worked, so far requiring very little timber and very little blasting; in fact, when opened up, four men below in each shaft should keep 10 stampers going." Mr. Frederick W. Timperley cabled on 2nd March:—"Have examined the mines and workings; can fully confirm Scannell's report in all essential particulars."

The result of the crushing of 33 tons of ore at the public battery at Cue, as cabled by Mr. F. W. Timperley on March 23, was 38 ounces, the average assay of gold in tailings being 4 dwts. per ton. This is 1 ounce 7 dwts. gold to the ton, and, according to the prospectus, is satisfactory as to the value of the ore in bulk. The prospectus further states that it is proposed to start the first level at about 100 feet on the main reef, which will at once open up "backs" for stoping, and afford ample gold quartz for milling; and it is reckoned that a 10 head battery should treat in one year 7500 tons, which would mean 8625 ounces per annum, worth, at £3 15s. per ounce, about £32,344.

SANTA RITA NITRATE.—The annual general meeting of the shareholders in the Santa Rita Nitrate Company was held on Thursday at Winchester House.—Mr. H. W. Lowe presided, and, in moving the adoption of the report and accounts, said though the result of the year's trading had, perhaps, not attained the dimensions that were expected or hoped for, there were reasons which had caused a reduction in the rate of profits that could be easily accounted for, and which did not affect the position or standing of the company as to its future prospects. From the profit and loss account it would be seen that the net profit for the year was £11,802. This was not quite so good as last year, but they had had to meet difficulties that were quite unexpected. Should the various companies engaged in the nitrate industry be able to effect a combination, they might look forward to a return for some years of the prosperity that was enjoyed in the past; and they would be subject no more to the vacillations of profit such as they had experienced during the past three years.—Mr. J. M. Clarke seconded the resolution for the adoption of the accounts, which was put and carried.—Mr. Henry W. Lowe was then re-elected a director, the auditors were reappointed, and the proceedings closed with a vote of thanks to the Chairman and directors.

THE MINING MARKET.

FRIDAY EVENING.

A general shake-out following upon two market failures.—Unpopular action of jobbers in the Kaffir Circus.—An alarmist message from Pretoria to Paris.

THE Mining Market has been the scene of trouble and alarm throughout the past week. A combination of circumstances, partly natural and partly recklessly engineered, has effected a radical change in the condition of the market and the attitude of the public towards it. When we wrote a week ago that the Account had become unwieldly and that many of the leading operators were by no means averse to a little set-back, we did not anticipate the methods of bringing this about which some of the jobbers of the market have thought fit to adopt. We reported that a Contango, which worked out at 80 per cent. per annum was offered last Account for the continuation of East Rands, a circumstance which, as we pointed out, indicated some very weak speculation. It has since transpired that Mr. G. E. De Rivaz, a young jobber who had been a leading figure during the boom, found himself unable to carry over a large block of East Rands and Potchefstrooms, and, being unable to pay for the shares right out, he was "hammered," a fate which also overtook another jobber, Mr. E. T. Higgins, who had had a joint book with him in certain shares. The liquidation of these two accounts caused a general flatness on Monday and Tuesday morning, but on Tuesday afternoon there was a sharp rebound, and for the moment it looked as though the scare was over. This speedy recovery, however, did not at all suit the books of certain jobbers, who were expecting a more general collapse. They accordingly hit upon the remarkable device of sending round printed circulars indiscriminately to brokers with whom they had accounts open, intimating that at the forthcoming Settlement they would curtail or withhold facilities for carrying over. The immediate effect of this arbitrary and unbusiness-like proceeding was to compel realisations from all sorts and conditions of speculators. Brokers who found themselves with large accounts in such shares as Johannesburg Investments and East Rands had no alternative but to inform their clients that unless they could arrange for the lifting of the stock from the market they must take the risk of being unable to carry over on Tuesday. In this way a widespread scare was developed, and quotations were marked down all along the line. It is a noticeable point that there was never any actual panic. Buyers were always forthcoming at the lower level. A good deal of strong feeling has been engendered by the action of the jobbers in question, who will inevitably suffer in the loss of custom in future.

Whilst the London Market has been upset by these local causes, a disturbing element has arisen in Paris in the publication of a pessimistic communication from the French Consul-General at Pretoria. This gentleman evidently does not understand the lines upon which mining speculators are accustomed to work, and his warning against optimistic estimates of the Witwatersrand industry is couched in terms which would have little effect upon well-informed people. Unfortunately, however, the investors who have been tempted into the Kaffir Market are not all well-informed, and the ill-advised utterances of this official have created amongst them a temporary scare at a moment when the Market most needed Continental support. There are indications to-day that the alarm both in London and on the Continent is coming to an end. The elimination of weak operators will prove beneficial for those who were strong enough to stand the strain, and the Market will be intrinsically all the better for the shake-out. This, however, is poor consolation to the sufferers.

On Saturday morning a dull tone pervaded the South African market, and many well-known members were conspicuous by their absence, the counter attractions of Kempton Park proving stronger than those of Throgmorton Street. Small declines were shown in the majority of Gold shares, whilst Land shares, under the lead of Oceana, were rather inclined to harden. Strength was shown in West Australians and Miscellaneous had quite an appearance of buoyancy. Copper shares were good, and some Indians were a shade harder. On Monday came the 'hammering" of Mr. De Rivaz, and its attendant scare. It was noticed that French orders in the Kaffir Market although on a small scale, were chiefly for sales. Land descriptions were also flat, and a distinct downward tendency manifested itself in West Australians and Miscellaneous. Exceptional gains were, however, shown in some Indian, Charters Towers, and New Zealand specialities. On Tuesday the market opened flat, and, on the announcement of the second failure, selling predominated for some time. About mid-day, however, the situation changed, and substantial purchases were made, bringing about gains in those shares which had been specially depressed. Land shares joined in the improvement. Westralians were quiet with less business doing. The Miscellaneous section followed the course of Kaffirs, the afternoon's reaction more than nullifying the morning's losses. Throughout Wednesday prices sagged away, small sales being ordered from France, as the result of the manifesto of the Consul of Pretoria, mentioned above. Heavy liquidations were pressed during the afternoon, accompanied by wild rumours of further failures—not only in London, but in Glasgow. No confirmation of these reports, however, came to hand, and the real ground of alarm was revealed in the receipt of the obnoxious circulars from the clique of jobbers to which we have already alluded. On Thursday the market went from bad to worse, and realisation was the order of the day, until the last hour, when a distinct rally set in. There was no exception to the downward tendency during the earlier hours, and, as a result, heavy losses were marked all along the line. This morning the tone was decidedly more steady. Brokers were encouraging the idea amongst their clients that the manœuvre of the jobbers in working for lower prices will not be again successful. About two o'clock the market became more active, and those shares which had been most depressed were bid for, bringing about a general improvement. The close is distinctly good, and points to further improvement before the Account, as there are numerous "Bears" who will have to buy back.

South African Mines.

East Rands opened on Saturday at 5⅛, shedding ⅛ during the morning. Mr. De Rivaz's failure knocked the price to 4⅝ on Monday, but on Tuesday there was a smart rally to 5⅜. The whole of this gain was lost on Wednesday, and on Thursday, under the influence of the jobbers' circular the shares were offered as low as 4⅛. The last price to-night is 4⅜, a smart rise have occurred during the last hour. Curiously enough the shares of the subsidiary companies, Comet and St. Angelo, have been amongst the hardest, closing at 3⅛ and 3⅜ respectively. It is in consequence of the trouble incurred by the claiming of rights in respect of the frequent reconstructions undertaken, that East Rands have become unpopular with takers-in of shares. For the genuine investor

who can afford to take them off the market, the present depression affords a good opportunity of getting in. Rand Mines dipped from 32¼ to 31⅞ on Saturday, shedding another 1⅛ on Monday at 30¾. By Wednesday there was a recovery to 30⅞, but in the slump of Thursday the price was anything between 28 and 29. To-day the shares are better at 30¼, which marks a fall of 2¼ on the week. Minor losses are shown in other Deep Level shares, Nourse Deep having lost ⅛ at 5⅛, Nigel Deep ⅜ at 2⅛, Champ d'Or Deep 1/16 at 1⅛, Geldenhuis Deep ⅛ at 8⅜, Goldfields Deep ⅛ at 6⅜, and Roodepoort Deep 1/16 at 3 1/16. The Barnato stocks, which had been less inflated during the boom, suffered proportionately less in the slump. The chief losses are ⅜ in Spes Bona at 3, 1/16 each in Buffelsdoorn at 5 1/16 and New Primrose at 7, 1/16 in Ginsberg at 1 1/16, ⅛ in May Consolidated at 3⅛, 1/16 in Langlaagte Royal at 4⅛, and ⅛ in Glencairn at 4. Van Ryn, in which the buying at high prices had been of a very speculative class, suffered severely during the periods of flatness. Opening at 10⅞ on Saturday, the price speedily went away to 10⅛, and on Monday was no better than 8⅜. There was a rally on Wednesday to 9⅜, but Thursday's shake-out saw the shares at one time as low as 8. The last price—8⅛—shows a loss of 2⅜ on the week. Van Ryn Wests are 1⅜ down at 4⅛. Knight's, after dipping to 7, close strong at 7⅞, and City and Suburban, which at one time had lost a point at 24½, close firm at 25. Amongst the steadiest shares are Heriots, which are only ⅛ lower at 11⅛, and Langlaagte Estate ⅛ down at 4 1/16; Modders are 1⅛ easier at 14⅛; Wemmers, ⅛ down at 11; Wolhuters, ⅜ down at 6⅞; and Salisburys, ⅛ easier at 5⅛. It will be seen from the foregoing prices that the fall has been universal. The lower-priced shares have escaped without such signal grief. Randfontein are 4s. down at 39s.; Luipaard's Vlei, 3s. easier at 19s. 6d.; and George and May, ⅛ down at 1⅝. Among the more essentially gambling counters heavy losses are shown in Jumpers Extended at 6s. 6d.; Thistle Reef at 4s. 3d., and Lower Roodepoort at 7s. On the other hand some of the low-priced shares have stood their ground remarkably well. Gold Coast Developments are hard at 8s., Pardy's Range at 11s., and Johannesburg Gold Fields at 8s. 9d. The reaction in Shebas has continued, the price being back ⅛ at 1⅜. Spitzkops also have receded ⅜ to 1 1/16.

In Land Companies, Chartered have naturally been a prominent feature, and close at a loss of ⅛ at 3 1/16, after being offered under 3⅛. Henderson's, in which the chief market was one of the circularising jobbers, were as low as 3 at one time, but close 1⅛ down at 3⅜. Tati Concessions, which come into the Settlement this time, close at 3⅛, after being below 3. Potchefstrooms, largely affected by the failure of Mr. De Rivaz, close ⅜ down at 1⅛, after being offered under 1. A good deal of underlying strength has been displayed by Klerksdorps, which have two or three times been sold down under 23s., but have quickly rebounded. The last price 24s. 6d. shows a loss of 4s. on the week. Mozambiques are 5s. 6d. down at 29s., and Oceana 1/16 easier, at 2 1/16. Pardy's close in demand at 2⅛. South African General Developments have been exceptionally steady at 8s. Consolidated Gold Fields after marking a loss of a point, at 8⅛, close strong at 9⅜, and Gold Trusts are 1/16 easier, at 7 1/16, after being considerably lower. Johannesburg Investments close ⅜ down, at 4⅛, after being offered at 3⅞, as a direct consequence of the notorious circular. Diamond shares have participated in the depression, De Beers having shed 1/16 at 20 1/16, Jagers ⅛ at 9⅛, St. Augustine 2s. at 13s., and Gordons 1s. 6d. at 6s. 6d.

West Australians.

This market has followed the lines of Kaffirs, with the result that a general decline in prices is shown on the week. Londonderry had a flicker to ⅞ on Monday, on a reported find on the property. No confirmation, however, was forthcoming, and the price leaves off without alteration at 1⅛. A cable message from Mr. Zebina Lane, announcing another 10-ounce crushing at the Great Boulder, has not had the intended effect, the price being 1/16 easier at 2 1/16. Hampton Plains and Lands have been sold, and mark losses of ⅛ at 2⅜ and 4⅛ respectively. Austins are 1/16 down at 1⅛. A good business has been done in Coolgardie Syndicate, Murchison's and Sherlaw's Gold, all of which have maintained last week's prices. Idahos are 1s. 3d. down at 5s., and losses of 1/16 are shown in Golconda and Kinsella both at par. Murchison Gifts and South Londonderry have attracted a fair amount of attention. The various finance and concession companies are ⅛ to ¼ down, and Zapopans have shed 3s. at 7s. Bayley's Reward is exceptionally 2s. better at 11s. 6d.

Miscellaneous.

The feature in this section has been the activity of Copper shares, based upon fluctuations in the value of the metal. On Wednesday a meeting of representatives of the European producers unanimously agreed upon a reduction of the output for the next year conditionally upon a similar restriction of the American shipments. On Thursday a report obtained credence that the combination had broken down, and as some authority was given to this by a fall of 30s. per ton in the price of the metal, the share market developed great weakness. This morning it was put about that there was no valid excuse for the fall in Tintos beyond the realisations of a firm of large dealers. It seems, however, that the agreement between American and European producers has not been actually ratified, owing to absence from home of several leading men on the other side of the Atlantic. Rio Tintos opened on Saturday at 16⅞, and rose to 17½, copper being quoted at 44⅝. Monday, Tuesday, and Wednesday witnessed falls in the shares of about ¼ per diem, whilst on Thursday the price dipped to 15⅛, finally closing at 15 1/16, or ⅞ down on the day. The closing price to-night is 15 3/16, copper being quoted at 42½. Mason and Barry stood at 3⅛ on Monday, but lost ⅛ on Thursday at 2⅞. Tharsis are practically unchanged at 4⅜. Capes rose to 2⅝ on Saturday, and after fluctuations day by day close ⅛ down at 2, which is also the price of Copiapo, Namaqua, which we left at 1⅝, close the odd fraction down at 1, whilst Libiola are ⅛ better at 3⅝. Indian Gold shares are somewhat irregular, Champions marking a gain of 1/16 at 4 1/16, and Mysore 1/16 at 3, whilst Ooregums are 1/16 down at 3⅛ for the Ordinary, with 8⅛ for the Preference; and Nundydroog have lost a like fraction at 1⅞. Haurakis have been steadily bought during the week, and at one time touched 14s., closing 2s. 6d. up at 12s. 6d. Kapangas are unchanged at 13s. 6d. Broken Hills are firm on the improvement in the price of silver to 30 1/16d. per ounce. Props. are 6d. better at 45s., with British 6d. down at 7s. 6d., Bendigo at 7s., New Chums at 14s. 3d., La Reine d'Or at 17s., Holcomb Valley at 2s. 3d., Kaboonga at 3s. 3d., Achilles at 4s. 3d., Graskops at 6s. 6d., and Charters Towers Consolidated at 3s. 6d., may be taken at random as instances of the general decline in pence and shillings among the lower-priced specialities. Burmah Rubies are 3s. 6d. down at 20s. Wentworths have been very flat round 15s. on a cable confirming the estimates of the prophets as to the April crushing. The total production was 2500 ounces. The report from the mine was thoroughly unsatisfactory. As though to cap this came a cablegram from the Amana, one of the subsidiary companies, stating that the superintendent had found the alluvial deposits too unprofitable to work, and had accordingly shut down everything. The manipulation of this group has been one of the scandals of the year. Unfortunately, French investors have had their share of these at top prices, as well as of Londonderrys and other much-puffed specialities which have turned out very differently from what was represented of them.

British Mines.

Prices in the Cornish market have varied considerably this week. On Monday and Tuesday all shares advanced rapidly, and it was very difficult to execute orders; but yesterday and to-day prices have receded in sympathy with tin. Dolcoath close about 48, after being 54. Wheal Basset advanced from 1¼ to 3, and close sellers 35s. Tincroft advanced to 8½, and close about 7¾. West Kittys are firm at 6⅜, and Grenvilles at 12¼ to 12½. The sudden rise in tin was quite unexpected. The same will apply to the drop. The dealers are very bare of stock, and should there be any material improvement in the price of tin, shares must move up rapidly. Wheal Agar engine will be restarted this afternoon, East Pool, Tincroft, South Crofty, and Carn Brea to pay £170 per month; the balance—about £40—was guaranteed jointly by Mr. Alfred Lanyon and Mr. Pearse Jenkin, the latter acting for Lord Robartes, who holds the mineral rights of Wheal Agar.

STOCK EXCHANGE SETTLING DAYS.

Settling Days on the Stock Exchange are as follow:—
Consols, Wednesday, June 5.

STOCKS AND SHARES.

MAY.

Ticket Days.	Account Days.
Thursday, May 23	Friday, May 24

JUNE.

Tuesday, June 11	Wednesday, June 12
Tuesday, June 25	Wednesday, June 26

Contango Days for South African Market:—

Tuesday, May 21	Saturday, June 8

NEW ISSUES.

MURCHISON NEW CHUM GOLD MINES (LIMITED).

This company has been formed with a capital of £160,000, in 160,000 shares of £1 each, of which 40,000 fully-paid shares will be allotted to the vendors in part payment of purchase-money, and 120,000 shares are now offered for public subscription for the purpose of acquiring "the mining leases, granted by the Western Australian Government, of the well-known New Chum Gold Mining Property, situate at Mount Magnet, Murchison Gold Fields, Western Australia, comprising an area of 18 acres, together with the machinery, plant, &c., thereon." Mr. W. T. Harding, who as the representative of the Venture Mining Syndicate (Limited), selected the property, described it as "certainly the best property on the Murchison." "Although," says the prospectus, "the New Chum Mine commenced working only a few months since, the crushings yielded prior to April 26 no less than 5750 ounces of gold from 1470 tons, an average of nearly 4 ounces per ton. This result is the more remarkable, seeing that Mr. J. McCord states that "all stone broken to date has gone through the mill." The prospectus then goes on to quote the reports of Mr. R. Piper, late mining manager of the Broken Hill Proprietory Company, and Mr. J. McCord, manager of the Nannine Gold Mining Company, "both practical mining engineers of wide experience, specially selected by the late Mr. W. T. Harding to examine and report on this property. Mr. J. McCord states "that everything about the mine is in perfect working order," and congratulates the company "on having secured, what I believe to be, one of the most valuable properties in Western Australia."

As to the plant—"The mine is already equipped with machinery, plant, and surface works, including a 10 stamp battery, 20 horse-power engine and boiler, 30 horse-power pumping engine, pump, 20 horse-power Cornish boiler, 15 horse power marine boiler, winding engine, steel poppet legs, buildings and blacksmith's shop, &c., as detailed in Mr. McCord's report. The reports indicate that the supply of water is abundant, and suitable for all mining requirements. This company will take over the property as from the 1st January, 1895, receiving the proceeds of the gold won meanwhile, less expenditure. About 2900 ounces were obtained between that date and 26th April, and advices of another clean-up are daily expected. The development of the mine is now being vigorously pushed forward with the view of increasing the returns at an early date."

HANNAN'S STAR GOLD MINES (LIMITED).

This company has been formed, with a capital of £80,000 in 80,000 shares of £1 each, for the purpose, according to the prospectus, of acquiring and working "two important gold mining leases, Nos. 77 and 183, known as the 'Star of the East' situated in the mining district of Kalgoorlie (formerly known as 'Hannan's'), about 24 miles by direct road north-east of Coolgardie, with which it has telegraphic communication. The leases adjoin each other. No. 77 contains 12 acres, and No. 183 6 acres, the combined area of the two properties being 18 acres. The property is situated in a remarkable belt of auriferous ground south-east of the township of Kalgoorlie. This belt is several miles in length, and contains numerous lodes." The following are extracts from the conclusions arrived at by Mr. W. Thompson, M.E.:—"The main lode in Lease 77 shows, where opened, a width of about 16 feet; there is reason to believe that the full width has not yet been exposed. It has been driven on for 70 feet at a depth of 65 feet, and in every case assays and pannings have given unusually good results. On the surface also where the reef has been cut into to a depth of 7 feet, at a distance of 78 feet from the shaft, the return was 7 ounces 17 dwts. 1 grains to the ton; 128 feet distant from this point, at a depth of 65 feet, the return from the face of the drive was 11 ounces 12 dwts. 11 grains to the ton; and from the cut put in beyond what had hitherto been considered the hanging-wall, a large sample gave the high return of 31 ounces 10 dwts. 1 grain. Taking the average of all the samples for the whole length of the lode exposed, we get a return of 12 ounces 9 dwts. 17 grains to the ton. Assuming the average width of the lode for the whole length exposed to be 6 feet, there are at present about 4160 tons of ore in sight, and assuming that 5 ounces per ton (of gold) will be recovered by ordinary battery processes, we have available a gold value of about £73,000."

Mr. Cordner-James, Mining Engineer, A.M.Inst.C.E., managing director of the British Coolgardie Prospecting Syndicate (Limited), who examined the property in September last, in a letter to the directors of the syndicate, dated January 28, states:—"Mr. Thompson's description of the locality of the leases agrees with my own observations. Regarding the lodes, I was able to distinguish at least two distinct auriferous deposits running nearly parallel, having a general bearing of N. 40° W., and separated by a distance of about 180 feet. I was unable to determine exactly the nature of these deposits, which, although well known at Hannan's, are quite different from the quartz veins which I examined in other parts of the goldfields."

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, MAY 17.

Copper.

At the commencement of the week, the conclusion of the producers' arrangement, referred to in our last report, was still being widely talked of as a practical certainty, and prices were driven up to £45 10s. for three months G.M.B.'s, but on Thursday morning, to the general astonishment, came the news that the Americans declined to conclude the arrangement, and that there was very little chance of any resumption of the negotiations; and the fact that the very people who had been "bulling" the market all along had already been selling on the previous day, and were, therefore, doubtless, already aware of the definite rupture of the negotiations, led to much angry comment on the manner in which the whole affair had been manipulated by those most conspicuously interested in it. At all events, orders for realisations were given right and left, and the market dropped. Whilst the market was at its best some good sales were made to consumers, and manufactured copper was also in rather better demand, but since the collapse, in neither refined nor in manufactured, have there been any dealings, and prices are more or less nominal. The course of the speculative market is here given in detail. The opening on Monday was very excited, and £44 15s. cash, G.M.B.'s, and £45 10s. three months, were done, the two positions changing hands subsequently, and down to £44 6s. 3d. and £44 15s. respectively. The volume of business was very large, the turnover—3750 tons—exceeding that of any day for a long time past. On Tuesday about 2750 tons changed hands at £44 3s. 9d. and £44 1s. 3d. s.c. and £45 to £44 10s. three months, the turnover amounting to about 2750 tons. Wednesday's business amounted to 3250 tons, and the continued realisations brought values down to £43 17s. 6d. s.c., and £44 5s. three months, £44 7s. 6d. being paid later. On Thursday the totally unexpected news above detailed induced heavy sales, in consequence of which values declined rapidly, the close that day being at £42 1s. s.c., and £42 17s. 6d. three months. To-day we opened firm at £43 three months, but the market was very irregular, and after touching £42 7s. 6d. three months and £42 s.c., it closes better and steady at £42 5s. to £42 7s. 6d. s.c. and £43 13s. 9d. to £42 15s. three months.

Tin.

opened very buoyant with s.c. Straits at £67 10s., an advance of 25s. per ton A thousand tons changed hands in the course of the day, the market being very animated, whilst cash advanced a further 17s. 6d., touching £68 7s. 6d., with three months done up to £69 7s. 6d., and then down to £68 7s. 6d. Tuesday's turnover was about 850 tons at £68 12s. 6d. to £68 s.c., and £:9 to £68 7s. 6d. three months, the fluctuations being frequent and irregular. Wednesday's market opened £1 lower, and after a momentary rally to £68 7s. 6d., it fell again, making £65 17s. 6d. s.c. In all about 525 tons changed hands. To-day, under the continued influence of the flat copper market, tin was weak at £65 17s. 6d. s.c., but formed up towards the close, which was at £66 5s. to £66 5s. to £66 7s. 6d. s.c., and £66 12s. 6d. to £66 15s. three months. In the Dutch market the following were the successive morning quotations telegraphed from Rotterdam:—Monday, 40½ fl. s.c., 40¾ fl. three months; Tuesday, 41⅛ fl. and 41¾ fl.; Wednesday, 41⅛ fl. and 41¾ fl.; Thursday, 40⅝ fl. and 40⅞ fl., and to-day 40½ fl. and 40¼ fl. s.c. and three months respectively, Banca being simultaneously quoted 41¼ fl.

Pig Iron.

On Monday, the Glasgow warrant market opened very firm at 44s. 4½d. and 44s. 6d. early June, but 44s. 2½d. s.c. Scotch was accepted later on in the day, and 43s. 9½d. on Tuesday. Wednesday showed, at first, a slight recovery, 43s. 11½d. being realised, but 43s. 9½d. was again taken before the close, and on Thursday, influenced, no doubt, by the fall in copper and tin, iron dropped sharply to 43s. 3d. s.c. To-day's market was dull down to 43s. 1½d., and it closes at 43s. 1d. s.c. buyers, and 43s. 3d. a month, with hematite and Middlesbro' at 43s. 3¼d. and 54s. 11d. respectively. The shipments last week from Scotland were 7317 tons, or 2015 tons above those of the same week last year.

Lead

opened strong and 5s. higher—viz.: at £10 5s. soft foreign—and £10 7s. 6d. was spoken of on Thursday as having been paid for forward delivery. The close is quiet, with sellers at £10 5s. of soft foreign, and £10 7s. 6d. English.

Spelter

has improved again in a marked degree. It opened at £14 12s. 6d. ordinaries, a rise of 5s., advanced to £14 7s. 6d. Tuesday, and £15 Wednesday. It has since been depressed in sympathy with other metals, and closes dull at £14 15s. ordinaries, and £15 specials.

Antimony

is firm at £31 10s.

Quicksilver

has advanced to £7 5s. firsts and £7 3s. 6d. seconds.

The following are to-night's (May 17) prices of metals:—

		£ s. d.	£ s. d.
Copper.			
Tough cake and ingot		44 15 0	45 5 0
Best selected		45 15 0	46 5 0
Electrolytic Copper			Nominal.
Sheets and sheathing		—	53 0 0
Flat bottoms		—	56 0 0
Chili bars	spot, & 3 months respectively	42 5 0	42 13 9
Good merchantable,			
Copper tubes, seamless		—	0 0 7
Alloys.			
BRASS: Wire		—	0 0 6¼
,, Tubes (solid drawn)		—	0 0 6¾
,, Sheets		—	0 0 5¾
PHOSPHOR BRONZE: Alloys II.		—	78 0 0
,, ,, III. or	Cog Wheel Brand	—	81 0 0
,, ,, VII.		—	83 0 0
,, ,, XI.		—	78 0 0
,, ,, Vulcan brand A1		—	72 0 0
DURO METAL		—	73 0 0
BULL'S METAL		—	65 0 0
Ferrobronze (Vivian's).			
Ingots ...per lb.		0 0 5¼	—
Ordinary sheets, plates, bolts and bars		0 0 6¼	—
Screw bolts and nuts		0 0 8	—
Pump rods, plain		0 0 7	—
,, finished		0 0 10	—
DELTA METAL: No. 4 (per ton)		—	—
,, Sheets and plates (per lb.)		—	—
,, Bars, round, square, flat (per lb.)		—	—
,, ,, hexagon (per lb.)		—	—
Tin.			
English, ingots, f.o.b.		70 10 0	71 0 0
,, bars		71 10 0	72 0 0
,, refined		72 10 0	73 0 0
Straits, spot and 3 months respectively		65 5 0	66 12 6
Australian spot, and three months respectively		67 0 0	67 7 6
Banca ,, (in Holland)		69 0 0	69 2 6
TIN PLATES: Charcoal, best quality	per box	0 14 0	0 16 0
,, ,, ordinary		0 11 9	0 13 0
,, Coke, best quality		0 18 0	0 19 3
,, ,, ordinary		0 9 6	0 10 0

These prices of tinplates are f.o.b. at Swansea: at Liverpool 6d. per box more.

Iron.		
Pig, G.M.B., f.o.b., Clyde, spot		2 3 1½
,, Scotch pig, No. 1 Gartsherrie		2 11 0
,, ,, Coltness		2 12 6
,, ,, Clyde		2 3 6
,, ,, Govan		2 5 6
Bars, Welsh, f.o.b. Wales		4 17 6
Plates ,, ,,		6 0 0
Bars, Staffordshire, at works		4 17 6
Sheets ,, ,,		6 0 0
Plates ,, ,,		6 0 0
Hoops ,, ,,		5 10 0
Ship plates, Middlesborough		4 16 3
STEEL: English spring		10 0 0
,, ,, cast		42 0 0
,, Rails at works, according to section	3 10 0	4 15 0
Lead.		
Spanish or soft foreign		10 5 0
English pig, common		10 7 6
,, L.B.		10 12 6
,, sheet		11 7 6
,, bar lead		11 7 6
,, pipe		11 17 6
,, red		12 10 0
,, white		16 5 0
,, patent shot		14 10 0
Spelter.		
Silesian ordinary brands		14 15 0
,, special brands		15 0 0
English Swansea		15 10 0
Sheet Zinc	17 10 0	17 15 0
Antimony.		
Antimony		31 10 0
Quicksilver.		
Flasks, 75 lbs. warrants	7 3 6	7 5 0
Manganese.		per unit.
Ore, c.i.f., U.K. ports		
1st quality, 50 per cent. and upwards	0 0 10	0 0 10¼
2nd ,, 47 per cent. to 50 per cent.	0 0 9	0 0 10
3rd ,, 46 ,, 47 per cent.	0 0 7½	0 0 9
Aluminium.		Per lb.
98-99½ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)		0 1 7
do do (1 ton lots)		0 1 6
Nickel.		
98-99 per cent. guaranteed	0 1 6	0 1 7

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay*, Antimony; *A*, Arsenic; *Bl*, Blende; *Bx*, Borax; *C*, Copper; *D*, Diamond; *G*, Gold; *I*, Iron; *L*, Lead; *M*, Mundic; *N*, Nitrates; *P*, Phosphates; *Q*, Quicksilver; *R*, Ruby; *S*, Silver; *Sl*, Silver-lead; *Sul*, Sulphur; *T*, Tin; and *Z*, Zinc. * in the "Amount of Share" column of British Mines signifies that the mine is conducted on "Cost Book" principles; † in the "Head Office" column of African Mines signifies that the address given is not that of the head office, but of a sub, or transfer office; and ‡, following the names of African Mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

*** The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

BRITISH MINES.

Name	Closing Price, May 17, 1895	Closing Price, May 10, 1895.	Am't. of Share	Latest Dividend	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
			£ s.		£ s. d.			
Blue Hills .....*CT*	5/ 7/6	5/ 7/6	*	2/- May, '81	5 19 5	5,353	Cornwall	Camborne.
Botallack .. ...*T*	—	—	*	—	51 4 6	1,880	Cornwall	St. Just.
Carn Brea .....*T*	1¼ 1⅝	1¼ 1⅝	*	2/6 Dec.,'93	22 8 5	6,000	Cornwall	Carn Brea.
Cook's Kitchen ..*T*	5/- 10/-	5/ 10/-	*	—	35 15 15	4,900	Cornwall	Camborne.
Devon Gawton *CA*	par ¼ pm.	par ¼pm.	1 0	—	0 12 6	25,000	Tavistock	8, Finsbury circus.
Devon Gt Cons.*CA*	1¼ 1¾	20/ 25/	5 0	3/- Nov. '94	2 0 0	10,240	Devon ...	8, Finsbury circus.
Dolcoath .....*T*	43	41 41¼	*	12/6 Apr. '94	9 12 6	4,700	Cornwall	Camborne.
Drakewalls *CTM*	—	—	0 5	—	0 2 0	61,856	Cornwall	Dashwood House.
East Halkyn..... ...	20/- 25/-	20/ 25/	1 0	—	0 12 6	12,000	Flintshire	67, Lord St., Liverpl.
East Pool .....*AT*	4⅞ 5⅛	4⅞ 5⅛	*	1/6 Sept, '94	0 9 9	6,400	Cornwall	Illogan.
Gawton .....*CA*	—	—	2 10	—	2 7 0	12,000	Devon ..	20, Great St. Helens.
Great Laxey.....*L*	1¼ 1¾	½ 1⅜	4 0	5/- Apr., '92	4 0 0	15,000	I. of Man	Douglas, Isle of Man.
Green Hurth ...*L*	1/6	1/6	1 0	-/6 June '89	0 19 0	32,000	Cmberlnd	Newcastle.
Halkyn .... *L*	9 10	9 10	1 0	—	1 0 0	10,000	Flintshire	Chester.
Do. Dis. Mn. Drain	8½ 10⅛	8½ 10½	10 0	4/- Mar. '95	10 0 0	10,000	Flintshire	Corn Ex. Cmb. Chestr.
	—	—	1 0	6 p c Aug. 94	1 0 0	3,000	Flintshire	67, Lord St., Liverpl.
Isle of Man .....*L*	3⅞ 4⅜	3⅞ 4⅜	5 0	1/6 Dec. 94	5 0 0	11,000	I. of Man	Chester.
Killifreth .....*T*	5/ 10/-	5/ 10/-	*	1/6 Nov.,'94	5 11 6	6,000	Cornwall	Truro.
Leadhills .....*L*	15/- 20/-	15/- 20/	6 0	3/- Sep. '92	6 0 0	20,000	Lanarksh.	30, Finsbury-circus.
Llanarmon	par	par	1 0	—	1 0 0	21,990	Denbigh	8, Werburgh Chmbrs
Llanarmon	par	par	1 0	—	0 15 0	3,790	Flintshire	Chester.
Levant .....*CT*	4¾ 5	4¾ 5	*	4/- Nov., '94	11 9 6	2,500	Cornwall	Penzance.
Lovell .....*T*	—	—	*	1/3 Nov., '91	1 16 7	7,165	Wendron	3, Gt. Queen-st., S.W.
Minera.....*L*	—	—	5 0	5/6 Mar. '90	5 0 0	9,000	Denbighsh	Minera, N. Wales.
Nenthd&Tndle.*LZ*	3/6	3/6	1 0	6¾ Feb., '91	0 18 0	48,875	Nthumbld	Newcastle-on-Tyne.
NewCooksKitn.*TC*	—	—	*	—	10 18 3	4,900	Cornwall	Camborne.
New Minera.....	—	—	1 0	1/- Oct., '92	1 0 0	30,000	N. Wales...	6 Queen-street-place.
North Hendre	—	—	2 10	8 p c year 82	2 10 0	11,854	Flintshire	11, Nwgt. st., Chstr.
Parc .....*LZ*	—	—	1 0	—	1 0 0	5,000	Llanrwst...	Billiter sq. buildings
Phœnix United*TC*	1/6 2/-	1/6 2/	*	1/- Mar. '90	7 4 6	10,668	Cornwall	Liskeard.
Polberro .....*T*	15/ 20/	15/ 20/	*	—	3 7 9	18,000	Cornwall	37, Walbrook.
Rhosemor ....*L*	par	par	1 0	10 p c Sept. 9'	1 0 0	1,000	Flintshire	Corn Ex. Cmb. Chestr.
Rhosemor .....*L*	par	par	1 0	—	0 19 0	18,000	Flintshire	Corn Ex. Cmb. Chestr.
So. Condurrow *TC*	2/6 7/6	2/6 7/6	*	3/6 Apr. '93	7 17 6	6,123	Cornwall	Pool, Cornwall.
South Crofty *TA*	7/6 12/6	7/6 12/6	*	—	17 7 6	6,120	Cornwall	Redruth.
S. Frances Untd. *T*	10/- 11/-	10/- 11/-	*	—	2 7 6	6,000	Cornwall	Redruth.
South Halkyn	par	par	1 0	—	1 0 0	10,000	Flintshire	8, Werburgh Chmbrs
South Halkyn	par	par	1 0	—	0 7 0	30,000	Flintshire	8, Werburgh Chmbrs
Talacre	par	par	1 0	—	0 15 0	23,000	Flintshire	84, Forgate st., Chstr
Tincroft .....*T*	7¾	6 6¼	*	2/- Aug. '94	15 7 6	8,000	Cornwall	Carn Brea.
Weardale .....*L*	8/9	8/9	4 0	1/3 Oct. '90	1 10 0	60,000	Durham...	3, Lombard-court.
West Frances ...*T*	8/6 9/6	8/6 9/6	—	2/6 May, '89	17 1 7	6,144	Cornwall	Camborne.
West Kitty .....*T*	6¾ 7	5¾ 6	*	2/- Dec, '94	1 2 0	6,000	Cornwall	37, Walbrook.
Wheal Agar ..*TA*	7/6 7/6	2/6 7/6	*	2/6 Aug. '88	23 15 2	6,000	Cornwall	Redruth.
Wheal Basset ...*TC*	35/	13/ 15/-	*	10/- Apr. '88	12 3 0	6,144	Cornwall	Redruth.
Wheal Friendly..*T*	-/6 1/-	-/6 1/-	*	—	0 12 9	10,000	Cornwall	110, Cannon-st., E.C.
Wheal Grenville *T*	12¾ 13⅜	10¾ 10¾	*	2/6 Nov. '94	18 2 0	6,000	Cornwall	7, Union-court, E.C.
Wheal Kitty.....*T*	2/ 4/	2/- 4/-	*	3/- Mar. '88	4 5 6	8,590	Cornwall	Truro.
Wheal Metal &F.*T*	1/- 1/6	1/- 1/6	*	—	0 13 9		Cornwall	14, Broad-street.

AUSTRALIAN AND NEW ZEALAND MINES.

Abbotts .....*G*	⅝ ¾	13/9 16/6	1 0	—	0 17 6	67,000	M'rchison	17, Old Broad st.
Achilles Gld Fld.	4/ 4/6	4/- 5/-	2/6	—	0 2 6	642,456	N.Zealand	Poultry.
Aladdins Lamp *G*	1¹⁵⁄₁₆ 1¹⁵⁄₁₆	⅞ 1	1 0	1/- May '55	1 0 0	100,000	N S.Wales	4-6, Throg. Avenue.
Assoc. Gold Mines	⅜ ⅝	16/3 13/9	1 0	—	1 0 0	375,000	Coolgardie	20, Bucklersbury
Austin..... *G*	1¹⁵⁄₁₆ 1¹⁵⁄₁₆	1⅛ 1⅜	1 0	—	1 0 0	50,000	Murchison	23, College hill, EC
Australasian .....*G*	4/3 4/9	4/9 5/3	1 0	-/6 Mar., '92	1 0 0	210,000	Queensind	6, Queen-st, place
Australian .....*C*	— —	— —	20 0	1/6 July '94	7 7 6	18,315	S. Austral.	15, Old Jewry Chbrs
Aus. Bro. Hill Con.	4/3 4/9	4/3 4/9	1 0	1/- June, '91	1 0 0	537,138	N.S.Wales	Dashwood House.
Baker's Creek ...*G*	17/6 22/6	17/6 22/6	1 0	1/- May '95	0 17 6	100,000	N.S.Wales	Hillgrove, N.S.Wales
Bayley's Reward *G*	12/ 13/-	9/6 10/	1 0	-/4 Dec. 94	1 0 0	480,000	Coolgardie	Feb'y, H. Bl'm'fld St.
Big Blow .....*G*	1⁵⁄₁₆ 1⁵⁄₁₆	¾ ⅞	1 0	—	0 15 0	100,000	Coolgardie	Blomfield Ho., E.C.
Blackett's Claim *G*	⅛ 9⁄16	½ 9⁄16	1 0	—	1 0 0	60,000	Coolgardie	Winchester House
Blue Spur & G. G.	-/6 1/-	-/6 1/	1 0	—	1 0 0	80,098	N.Zealand	6, Gt. St. Helens'
Bonnie Dundee *G*	15/6 16/6	17/ 18/	1 0	—	0 18 6	120,000	Queensind	3-5, Gracechurch-st
Brilliant..... .....*G*	17/- 19/-	⅞ 1	2 0	-/4 Mar. '95	2 0 0	250,000	Queensind	Charters Towers.
Brilliant Block...*G*	1¹⁵⁄₁₆ 2⅛	1¹⁵⁄₁₆ 2-1⅛	2 0	-/6 Apr. 95	2 0 0	250,000	Queensind	3, Gracechurch-st.
Brilliant, St. Geo.	1⅜ 1⅝xd	1⅜ 1⅝	0 10	6d. May '95	0 6 3	72,000	Queensind	Charters Towers.
Brit. Brok. Hill *S*	— —	— —	1 0	—	1 0 0	—	N.S.Wales	Dashwood Ho., E.C.
Brit. Broken Hill	— —	— —	0 8	—	0 8 0	—	N S Wales	Dashwood Ho., E.C
Broken Hill Prop.	2¾ 2⅜	2¾ 2⅜	9 8	1/- Apr. '95	0 8 0	960,000	N.S.Wales	Dashwood Ho., E.C.
Cashman Bril.... *G*	⅜ ¾	⅜ ¾	1 0	—	1 0 0	60,000	Coolgardie	Winchester House.
Carrington.... ....*G*	10/ 11/	9/6 10/6	12/6	—	0 12 6	100,007	Queensind	9, Tokenhouse Yard.
Con. G. M. of W. A.	⅜ 1	1⁵⁄₁₆ 1¹⁵⁄₁₆	1 0	—	0 17 6	90,000	W.Austral	14, Hill st., Edinboro'
Coolgardie .....*G*	-/9 1/-	-/9 1/-	0 2	—	0 0 6	40,000	Coolgardie	Winchester House.
Coolgardie(Shrlws)	13/ 14/	13⅛ ¾	1 0	—	0 5 5	—	Coolgardie	Winchester House.
Craven's Cal. ... *G*	3/6 4/6	3/6 4/6	0 6	-/3 June 94	0 4 8	100,000	Queensind	30-1, S. Swithin's-le.
Crown Bayley's..*G*	1⁵⁄₁₆ 1⅜ pm	1⁵⁄₁₆ 1⅜ pm	1 0	—	0 10 0	80,000	Coolgardie	Bishopsgate Ho. E.C.
Cumbrind (New)*G*	4/ 5/	3/9 4/3	1 0	2/6 Dec, '87	0 19 0	184,890	Queensind	Blomfield House E.C
Day Dawn B.&W.*G*	—	11/9 12/3	1 0	-/6 Mar. 93	1 0 0	498,400	Queensind	3-5, Gracechurch-st,
Day Dawn P. C. *G*	¾ ⅜	6/- 6/6	1 0	-/6 Apr, '92	1 0 0	490,000	Queensind	Winchester Ho., E.C
Eaglehawk.....*G*	1/6 2/-	1/6 2/	1 0	—	0 19 9	120,000	Victoria...	31, Lombard-street,
Empress Coolge. *G*	¾ ⅝ dis.	¾ ⅝ dis.	1 0	—	0 10 0	90,000	Coolgardie	2, Tokenhouse bldgs
Eng. & Aus.Cop.Cs	1⁵⁄₁₆	1⁵⁄₁₆	2 0	2½ 1883	1 17 6	70,000	S. Austral.	136, Palmerston-blds
Frederick the Gt *G*	—	—	1 0	—	1 0 0	125,000	Victoria..	St. George's House.
Glenrock ..... *G*	1/3 1/9	1/6 2/	1 0	—	1 0 0	225,000	N. Zealand	3-5, Queen-st., E.C.
Golconda .....*G*	1 1¼	23/9 26/3	1 0	—	1 0 0	68,086	Murchison	Winchester House.
Gold Estates.....	1⁵⁄₁₆ 1⁹⁄₁₆	1⅜ 1½	1 0	—	0 10 0	80,000	W. Austral	42, Gresham House.
Great Boulder ...*G*	1⅛ 1⅜	1¼ 1⅜	1 0	—	1 0 0	119,280	Yilgarn ..	3, Gracechurch st.
Great Coolgardie...	⅞ 15⁄16	15⁄16 1⅛	1 0	—	0 15 0	85,000	Coolgardie	3, Budge Row.
Great Fingall Rfs.	1⅞ 2⅛	2⅛ 2¼	1 0	—	1 0 0	175,000	Kurnalpi	B oad Street House.
Golden Gate..... *G*	2/2 2/9	2/3 2/9	0 10	—	0 10 0	150,000	Queensind	9, Tokenhouse Yard.
Hampton Lands...	4⅝ 4⅞	5 5¼	1 0	10/- Nov. '94	1 0 0	64,075	Coolgardie	1, Whittington Avue
Hampton Plains ..	2⅛ 2⅜	3½ 3⅝	1 0	—	0 4 0	350,000	Coolgardie	29, S. Swithin's lane
HamptonPlainsEx	6/- 8 6	6/6 7/-	1 0	—	0 18 0	180,000		Suffolk House, E.C
Hannan's BrwnHll	1¾ 1⅜	1¾ 1¾	1 0	—	1 0 0	65,000	Coolgardie	Broad Street House
Hauraki..... *G*	12/ 13/	9/6 10/6	2/6	—	0 0 6	250,000	Coromndl.	Dashwood Ho.; E.C.
Kaboonga .....*G*	4/ 4/6	4/ 4/6	0 10	—	0 9 9	500,000	Queensind	70-71, Bishopsgate st.
Kangarilla ....*S*	6/9 7/3	6/ 7/	1 0	—	1 0 0	88,275	So. Austral	68, Coleman street,
Kapanga.....*G*	⅜ 1⁵⁄₁₆	13/6 14/6	1 0	-/6 Jan. '61	0 19 6	250,000	N Zealand	9, New Broad-street.
Kilkivan.....*G*	— —	— —	1 0	—	1 0 0	81,392	Queensind	4, Coleman-street.
Kinsella .....*G*	1⅞ 2	1¾ 1¾	1 0	—	1 0 0	80,000	Murchison	33, Broad-st. Avenue
Kurnalpi.....*G*	11/ 12/	11/ 12/	1 0	—	— —	—	Coolgardie	Throgmorton Chbrs
Lady Loch.....	1⁵⁄₁₆ 9⁄16	⅛ ⅜	1 0	—	0 10 0	70,000	Coolgardie	9, Tokenhouse Yard,
Lady Mary Amalg.	1⅛ 1⅜	1⁷⁄₁₆ 1⁹⁄₁₆	1 0	—	1 0 0	46,000	Murchison	Blomfield House,
Lindsay	1⁵⁄₁₆ 1⁵⁄₁₆ dis	1⁵⁄₁₆ 1⁵⁄₁₆ dis	1 0	—	0 10 0	65,000	Coolgardie	Copthall House.
Londonderry..... *G*	⅜ ⅜	⅜ ⅜	1 0	—	1 0 0	467,000	Coolgardie	3, Gracechurch-st,
L.& W. Aust. Expl.	1⅞ 2⅛	2⅛ 2¼	1 0	10 p.c. Dec. '94	1 0 0	100,000	W. ustral	Broad Street Ho.
Mainland Cons. *G*	1⁵⁄₁₆ 1⁵⁄₁₆pm.	½ ⅝ pm.	0 15	—	0 15 0	150,000	Murchison	4, Old Broad Street
Mawson'sRewrd.*G*	1⁵⁄₁₆ 1⁷⁄₁₆	1⁵⁄₁₆ 1⁷⁄₁₆	1 0	—	0 10 0	60,000	W.Austral	28 & 29 S Swi hin's ln
Mills' Day Dawn*G*	1⁹⁄₁₆ 1⁷⁄₁₆	1⁹⁄₁₆ 1⁷⁄₁₆	1 0	-/6 May '55	0 15 6	300,000	Queensind	3, Gracechurch-st.
Mosman .....*G*	6/- 7/-	7/- 8/-	1 0	—	1 0 0	53,235	N.S Wales	18, St. Helen's-place.
Mt. Leyshon ..... *G*	— —	— —	1 0	-/6 Dec. '90	1 0 0	157,989	Queensind	7, Draper's-gardens.
Mount Morgan *G*	2½ 2⅝xd	2½ 2¾	1 0	-/6 May, 95	0 17 6	1,000,000	Queensind	50, Lime-street.
Mount Zeehan *SL*	-/6 1/-	-/6 1/	1 0	—	1 0 0	193,257	Tasmania	Mansion Ho. Cham.
N. Australian G. F.	19/- 20/-	19/ 20/	1 0	—	1 0 0	20,000		7, Union Court,
New Queen .....*G*	7/6 8/	7/9 8/3	1 0	-/6 Mar., '95	0 19 6	158,915	Queensind	30, St. Swithin's-la.
Nicol Mines	1 1¼	1 1¼	1 0	—	1 0 0	15,000	Pilbarra ...	151. Cannon St., E.C.
North Coolgardie..	3/6 4/	4/- 4/6	0 8	—	0 4 0	85,000	Co lgardie	128, Winchester Ho.
N. Q'ld. M.Agency	1¾ 1⅞	1⅞ 2	1 0	2/6 Jan. '95	1 0 0	90,000	Queensind	10 New Broad Street
Queen's Bthdy Un.	11/ 12/	12/6 13/6	1 0	—	0 12 6	75,000	Victoria...	7-8, Gt. Winchester St
Sam's With.of Nat.	3/9 4/3	4/6 5/-	1 0	—	0 18 0	200,000	W.Austral	33, Old Broad Street.
Scottish Australian	⅝ ⅞ xd	⅝ ⅞	1 0	-/3 May, '95	1 0 0	200,00	N.S Wales	Winchester Ho. E.C.
Victoria Associatn.	— —	— —	1 0	-/6 May, '95	1 0 0	144,000	Chr. Tow.	6, Crosby-square
Victory..... *G*	6/6 7/6	6/6 7/6	0 5	-/2 Mar., '94	0 5 0	200, 00	Queensind	32, Gresham-st., E.C
Walhi..... *G*	6¾ 7	6⅞ 7¼	1 0	2/- Jan. '95	1 0 0	150,000	N.Zealand	11, Abchurch-la E.C
Waratah..... *G*	9/6 10/6	9/6 1/6	0 10	—	0 10 0	8,000	Orydn,NZ	43, Threadneedle st
Wentworth Exten	5/- 6/-	5/- 6/-	0 5	—	0 5 0	178,848	N.S Wales	19, S. Swithin's Lane
Wentworth Ord.*G*	⅝ ⅞	15⁄16 1¹⁵⁄₁₆	1 0	—	1 0 0	350,000	N.S Wales	4-6, Throgmort. Av.
Went. Priority...*G*	— —	— —	1 0	8/- May '95	1 0 0	150,000	N.S Wales	4 6, Throgmort. Av.
W. Argentine .....*G*	1/- 1/6	1/3 1/9	1 0	—	0 19 6	150,000	N.Zealand	3-5, Queen-street.
W. Aust. G Conces	1¾ 1⅞	1¾ 1⅞	1 0	20 % May '95	1 0 0	17,500	W.Austral	33, Old Broad st., EC
W. Aus. Exploring	1⁵⁄₁₆ 1⁹⁄₁₆	⅝ ¾ pm.	1 0	—	0 15 0	100,000	W Austral	54, Old Broad st., EC
W.Australian G.F.	3⁹⁄₁₆ 3¹¹⁄₁₆	3¹¹⁄₁₆ 3¹⁵⁄₁₆	1 0	2/6 Dec., 94	1 0 0	65,000	Coolgardie	28-29, S. Swithin's-la.
W. Aust. Mining	4/5 5/6	5/9 6/3	1 0	—	1 0 0	104,297	W.Austral	157, Winchester Ho.
W. Mullina .....*G*	2/9 3/3	2/6 3/-	0 5	—	0 3 0	80,000	Pilbarra ...	Winchester House,
White Feather ...	1¹⁵⁄₁₆ 2¹⁄₁₆	2 2¼	1 0	—	1 0 0	60,000	Coolgardie	28 & 29, S. Swithin's ln
Zapopan.....	6/- 8/-	9/6 10/6	1 0	—	1 0 0	85,000	N W Austra	70, Bishopsgate-street
Zeehan Montana *S*	— —	— —	1 0	4d. Mar. 93	1 0 0	68,000	Tasmania	11, Queen Victoria st
Zeehan Montana *S*	— —	— —	1 0	8d Aug., 94	0 8 8	12,000	Tasmania	11, Queen Victoria st

EUROPEAN MINES.

Name.	Closing Price, May 17,1895	Closing Price. May 10, 1895.	Am't. of Share	Latest Dividend.	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
			£ s.		£ s. d.			
Alamillos .....*L*	10/- 15/-	10/-15/	2 0	-/6 April '95	2 0 0	35,000	Spain	6, Queen-street-plac
Avala .....*Q*	0 ⅛	0 ⅛	1 0	1/- May '93	1 0 0	51,584	Servia.....	4, Tokenho. Bldgs.
Consett Ore	5½	5½	1 0	5/- July 94	1 0 0	55,200	Spain	19, Grey-st., N'castle
English Cr. Spelter	⅜ ⅝	⅜ ⅝	1 0	2½ % Aug.'94	1 0 0	84,000	Lombardy	9, Queen-street-place
Fortuna ... . *L*	17/6 22/6	17/6 22/6	2 0	1/- April '95	2 0 0	25,000	Spain	6, Queen-street-place
Libiola.....*C*	3¼ 3¾	3¼ 3¾	5 0	4/6 Apr. 95	5 0 0	50,400	Italy	Dashwood Ho., E.C.
Linares .....*L*	4 4¼	3¾ 4¼	3 0	4/6 April '95	3 0 0	14,998	Spain	6, Queen-street-place
Mason & Barry...*C*	2⅝ 2⅞	2¹⁵⁄₁₆ 2⁹⁄₁₆	5 0	2/- May. '94	5 0 0	185,172	Portugal	87, Cannon-street.
Oscar .....*G*	— —	— —	5 0	—	0 4 6	117,240	Norway ...	6A, Austin Friars.
Pestarena .....*G*	6/6 7/6	7/ 8/	3 0	—	3 0 0	67,409	Italy	6-7, Queen-street-pl.
Pontgibaud .....*SL*	— —	— —	20 0	11/6 Dec '94	20 0 0	14,000	Coueron...	6-7, Queen-street-pl.
Rio Tinto .....*C*	15¾ 15½	15¹⁵⁄₁₆ 16¼	10 0	4/- May, '95	10 0 0	325,000	Spain	30, St. Swithin's-lane
Do. (Mort. Bonds)	105 107	101 103	100 0	5 % Apr, '95	100 0 0	£1891,740	Spain	30, St. Swithin's-lane
Do, (2nd do.)	102 104	102 104	100 C	5 % Apr. '95	100 0 0	£1024,860	Spain	30, St. Swithin's-lane
Do. (3rd do.)	101 103	101 103	100 C	5 p.c. Apr. 95	100 0 0	£317,080	Spain	30, St. Swithin's-lane
Ripanji .....*SQ*	13/- 14/-	11/- 12/	1 0	—	0 19 0	95,000	Servia.....	120, Bishopsgt-st, Wit
Tharsis..... ..*C Sul*	4⅞ 5⅛	4⅝ 4⅞	2 0	4/- May, '95	2 0 0	625,000	Spain	Glasgow.
West Prus Pre.pref	— —	— —	10 0	8 % Mar. 95	10 0 0	365	Germany	Walbrook Ho., E.C.
West Prussian Pre.	— —	— —	10 0	8 % Mar. '95	10 0 0	5,450	Germany	Walbrook Ho., E.C.
West Prussian Or.	— —	— —	10 0	8 % Mar. '95	10 0 0	14,050	Germany	Walbrook Ho., E.C.
Wohlfahrt .....*L*	— —	— —	1 0	3 % Dec. '94	1 0 0	99,634	Prussia ...	17, Victoria-st., S.W.
Wohlfahrt	— —	— —	1 0	3 % Dec, '94	0 10 0	9,090	Prussia ...	17, Victoria-st., S.W.

INDIAN AND ASIATIC MINES.

Asia Minor Pref. *St.*	—	—	0 10	—	0 10 0	42,430	Asia Minr	2, Metal Ex Bldgs.
Do. Ord. ...	—	—	0 10	—	0 10 0	59,838	Asia Minr	2, Metal Ex. Bldgs.
Balaghat Mysore*G*	4/- 4/6	3/6 4/6	1 0	—	0 19 0	159,945	India	6-7, Queen-street-pl.
Burma Ruby.....*R*	19/6 20/6	22/6 23/6	1 0	—	0 18 0	298,551	Burmah..	Suffolk House, E.C.
Champion Reef...*G*	4½ 4⅞	4⅜ 4½	1 0	4/- Apr. '95	1 0 0	200,000	India	6-7, Queen-street-pl.
Colar Central ...*G*	2/- 2/6	1/7½ 2/1⅝	1 0	—	1 0 0	200,000	India	Dashwood Ho., E.C.
Coromandel..... *G*	9⁄16 11⁄16	11⁄16 13⁄16	1 0	—	0 15 0	95,000	India	6-7, Queen-st.-place.
Gold Fids Mysore*G*	25/6 27/6	26/6 27/6	1 0	1/- July '92	1 0 0	275,000	India	6-7, Queen-street pl.
Gold Fids Sl m *G*	— —	— —	1 0	—	1 0 0	150,000	Siam	19, St. Swithin's-lane.
Hyderabad Dec. ..	8¾ 8⅞	8¾ 9	10 0	—	10 0 0	115,000	Deccan ...	16, St. Helen's-place.
Kempinkote GdFd	2/9 3/3	2/9 3/3	0 5	—	0 3 6	750,000	India	6-7, Queen-st.-place.
Mysore ..... *G*	2⅞ 3	2⅞ 3	1 0	2/- Feb, '95	1 0 0	248,354	India	6-7, Queen-street pl.
My. Harnhalli ...*G*	4/- 4/6	4/ 4/6	1 0	—	0 18 0	100,007	India	2, East India Avenue
Mysore Reefs ...*G*	7/- 8/-	7/ 8/	1 0	—	1 0 0	160,000	India	6-7, Queen-street-pl.
Mysore West(N)*G*	1⁵⁄₁₆ 1	1 1⅛	1 0	—	0 19 0	127,408	India	Dashwood Ho., E.C.
Mysore Wynaad *G*	1⁵⁄₁₆ 1	1 1⅛	1 0	—	0 19 0	125,000	India	Dashwood Ho., E.C.
Nine Reefs .....*G*	3/6 4/6	3/6 4/6	0 10	—	0 10 0	250,000	India	6-7, Queen-street-pl.
Nundydroog.....*G*	1⅞ 2	1¹³⁄₁₆ 1¹⁵⁄₁₆	1 0	1/6 Mar. '95	1 0 0	200,000	India	6-7, Queen-street-pl.
Ooregum (Dt.O.)*G*	3⅛ 3⅜	3⅛ 3¼	1 0	2/6 Apr. '95	1 0 0	145,000	India	6-7, Queen-street-pl.
Do. (10 % Pref.).	3⅞ 4⅛	3¹⁵⁄₁₆ 4¹⁄₁₆	1 0	2/6 Apr. 95	1 0 0	107,011	India	6-7, Queen-street-pl.
Do. (10 % Pref.).	3⅜ 3⅝	3⅜ 3⅝	1 0	2/6 Apr, '95	0 5 0	12,989	India	6-7, Queen-street-pl.
Pahang Kabang *T*	⅛ ¼	⅛ ¼	1 0	—	1 0 0	200,000	Malay Pn.	4a, Jeffrey's sq., E.C
S. Aust. Petroleum	1/6 2/-	1/6 2/	1 0	—	0 18 6	108,000	Burmah...	12, Pancras Ln., E.C.
Straits Developmt.	2⅜ 2½	2¹⁵⁄₁₆ 3¹⁄₁₆	1 0	—	0 19 0	184,292	Pahang ...	15, Copthall Avenue.
Yerrakonda .....*G*	3/- 3/6	2/9 3/3	0 4	—	0 2 6	187,491	Mysore ...	6-7, Queen-street-pl.

NORTH AMERICAN MINES.

Alaska Mexican...*G*	1½ 1¾	1½ 1¾	$5	7 1-5d. Apr. 95	$5	160,000	Alaska.....	30, St. Swithin's-la
Alaska Treadwell*G*	3½ 3¾	3½ 3¾	$25	1/6 Jan., '95	$25	200,000	Alaska....	30, St. Swithin's-la.
Almada and T... *S*	-/7½ -/10⅝	-/9 1/	2/6	—	0 2 6	351,008	Mexico ..	6, Queen-street-place
American Belle...*S*	2/3 2/9	1/9 2/3	1 0	-/6 Mar. '91	1 0 0	398,890	Colorado	25A. Old Broad-street
Anglo Mexican ...*S*	— —	— —	5 0	3/- Jan. '90	5 0 0	74,850	Mexico ..	23, College Hill.
Arizona (Pref.) Cu	25/- 25/3	28/9 30/-	4 0	—	4 0 0	158,920	Arizona ..	74, Geo.-st , Edinbr
Do. 6½ A Deben.	95xd	96	100 0	6½ % May '95	100 0 0	£135,300	Arizona ..	7¹, Geo.-st., Edinbr
Do. 7% B Deben.	82xd	81½	100 0	7% May '95

"THE MINING JOURNAL" SHARE LIST—(Continued)

SOUTH AND CENTRAL AMERICAN MINES—(Continued).

Name.	Closing Price, May 17, 1895	Closing Price May 10, 1895.	Am't. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Huanchaca .....S	—	—	5 0	4/- Sept. '94	5 0 0	320,000	Bolivia ..	10, Avnu. d'Alma, Paris
Javali ....G	-/8 1/8	-/8 1/8	0 2	8⅛ % '91	0 2 0	105,234	Nicaragua	139, Cannon-street.
Julia Taltal .....N	9/16 9/16	9/16 11/16	1 0	—	1 0 0	200,000	Chili	79½, Gracechurch-st.
Lagunas ....N	5½ 6	5¾ 6¾	5 0	15p.c. Dec.'94	5 0 0	120,000	Tarapaca	3, Gracechurch st.
Lautaro .....N	7¾ 8¼	7¾ 8¼	5 0	7/6 Dec. 94	5 0 0	110,000	Chili	70, Gracechurch st.
Liverpool .....N	10¼ 11¼xd	10¼ 11¼xd	5	15/-May, 95	5 0 0	22,000	Chili	Liverpool.
Loma .....G	2/- 2/6	2/ 2/6	1 0	—	1 0 0	300,000	Colombia	5, Copthall-building.
London Nit.....N	1½ 2	1¾ 2¼	3 0	3/4¾ Nov. '89	3 0 0	10,000	Chili	9, Gracechurch-st
LondonNit.(Pref.)	3½ 4	3½ 4	5 0	8% Nov. '94	5 0 0	22,000	Chili	9, Gracechurch-st
Macate	2/6 3/	3/3 3/6	0 2	—	0 2 0	200,000	Peru	11, Old Broad-st, E.C
New Tamarugal N	9/16 9/16	9/16 9/16	1 10	1s. Dec. '94	1 10 0	130,000	Tarapaca	50, Lime-street, E.C
Do. 8 % Cum Pref	15/16 1 1/16	7/8 1	1 10	8 p.c. Feb. '95	1 10 0	130,000	Tarapaca	50, Lime-street, E.C
Do. 6 p.c. Debs ...	91 95	91 95	100 0	6 p.c. Feb. '95	100 0 0	£260,000	Tarapaca	50, Lime-street, E.C
Orita ....G	1/6 2/-	1/6 2/	1 0	1/- April '89	1 0 0	30,000	Colombia	10, Blomfield-street.
Ouro Preto ... .G	— —	— —	1 0	—	1 0 0	80,000	Brazil	6, Queen-street-place
P.de. & Jaxpampa N	3 3½	3¼ 3¾	5 0	5/- Aug '94	5 0 0	72,000	Tarapaca	3, Gracechurch-st.
Primitiva .....N	1¼ 1¾	1¼ 1¾	5 0	2½ Oct. '89	5 0 0	40,000	Chili	Liverpool.
Qu-brada C	¼ ⅜	⅛ ¼	3 0	5% Mar. '92	3 0 0	241,958	Venezuela	38, Nicholas Lane.
Quebrada C	— —	— —	8 k.	6% Feb., 94	100 0 0	£400,000	Venezuela	38, Nicholas Lane.
Rosario .....N	4¾ 5¼	4¾ 5¼	5 0	7/6 Feb. '95	5 0 0	120,000	Chili	57¼, Old Broad-street
Rosario (5% Deb.)	103 105	103 105	100 0	5% April '95	100 0 0	£475,000	Chili	57¼, Old Broad-street
St. John del Rey G	1¼ 1⅝	17/16 19/16	1 0	10% June '82	1 0 0	323,090	Brazil	Finsby. Ho., Bim'd st
San Donato ... ..N	2¼ 2¾	2¼ 2¾	5 0	—	5 0 0	32,000	Chili	12, King-st., Liverp
San Jorge .....N	6 6½	6⅛ 6¾	5 0	7/6 Sept. '94	5 0 0	75,000	Chili	9, Gracechurch-st.
San Pablo .....N	1¾ 2¼	2 2⅛	5 0	2½ % Nov., '94	5 0 0	32,000	Chili	Gracechurch-st
Santa Barbara ...G	— —	— —	0 10	1/3 Dec. '88	0 10 0	80,000	Brazil	Liverpool
SantaElena .... .N	⅜ ⅝	⅜ ⅝	5 0	5/- Oct. '94	5 0 0	22,000	Tarapaca	3, Gracechurch-st.
Santa Rita .....N	3½ 4	3½ 4¼	5 0	15% Apr., '94	5 0 0	20,000	Chili	Dashwood House, E.C
San Sebastian ...N	2¼ 2½	2½ 2¾	5 0	5/- Dec, '94	5 0 0	29,000	Chili	Dashwood House, E.C
Segovia .....G	— —	— —	5/-	—	0 5 0	120,000	Colombia	5, Copth'll-buildings
Segovia Pref.....G	— —	— —	1 0	10% Dec. '94	0 15 0	840	Colombia	23, St. Swithin's ln.
Sucre Ord.....G	— —	— —	1 0	6% Dec, '94	1 0 0	10,000	Colombia	23, St. Swithin's ln.
Tolima "A" .....S	8 9	7¼ 7¾	5 0	10/- Apr., '95	5 0 0	14,000	Colombia	18, Finsbury-circus.
Do. "B" .....S	6½ 7	6⅛ 7	5 0	10/- Dec., '94	5 0 0	6,000	Colombia	18, Finsbury-circus.
Vic. & Altamira ...	2/3 2/9	3/3 3/6	0 5	—	0 5 0	200,000	Venezuela	Broad-st. Avenue.
West Indian.....G	— —	— —	0 1	—	0 1 0	1,725,585	Bingo. Dm	110, Cannon-street.

AFRICAN MINES.

Name.	Closing Price, May 17, 1895	Closing Price May 10, 1895.	Am't. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Abercorn Reef ...G	-/9 1/	/9 1/3	0 5	—	0 4 0	—	Millwood	16, Token'house Yard
African Alluvial ...	31/ 32/6	17/16 19/16	1 0	—	1 0 0	130,000	Mozambiq	11, Poultry.
Afr can Alluvial ...	13/ 13/6	12/ 12/6	1 0	—	0 3 6	20,000	Mozambiq	11, Poultry.
African Coal	9/8 10/	8/- 8/6	1 0	—	0 16 6	300,000	Middlebrg	19, St. Swithin's-lane
African Gold Con.	2/6 3/	2/3 2/9	0 10	20 p.c. Jan.'95	0 8 0	300,000	Mossel By	16, Tokenhouse-yard
African Gold Ryco.	1⅞ 1⅞	1⅞ 1⅞	1 0	2/- Oct. 94	1 0 0	175,000	—	23, College Hill.
Afrikander ..... G	2⅜ 2⅝	2 1/16 2 3/16	1 0	—	1 0 0	40,000	Transvaal.	19, St, Swithin's-lane
Agnes Block..... G	9/16 11/16	1/2 11/16	1 0	—	1 0 0	78,507	Transvaal.	54, Old Broad-street
Alexandra Estate G	12/ 13/	13/ 14/	1 0	—	1 0 0	225,000	Rand	Warnford Court, EC.
Anglo-French Exp.	3⅛ 3¼ xd	4⅛ 4¼ xd	5 0	10% Dec. 94	5 0 0	33,300	S. Africa	170, Winchester Ho.
Appantoo ..... G	— —	— —	1 0	—	1 0 0	77,885	West Cost	Dashwood House.
Aurora ..... G	1⅜ 1¾	1⅜ 1 7/16	1 0	5% Mar, '93	1 0 0	65,000	Rand	8, Old Jewry. I
Balkis Eerstelingg	3/6 4/-	5/ 5/6	0 10	—	0 10 0	520,000	Transvaal.	85, Gracechurch-st.
Balkis Land	4/9 5/3	5/9 6/3	0 10	—	0 10 0	520,000	Transvaal	85, Gracechurch-st.
Banket..... G	8/ 9/	9/ 10/	1 0	—	1 0 0	200,000	Rand	Johannesburg.
Bantjes Reef .....G	2¼ 2¾	3 1/16 3 5/16	1 0	—	1 0 0	83,000	Rand	Warnford-court. I
Barrett..... G	11/6 12/6	13/- 14/-	0 10	—	0 9 0	207,496	De Kaap	17, Basinghall-street
Bechuanaland Exp.	2⅜ 2⅝	2 1/16 2 3/16	1 0	1/- Mar. 95	1 0 0	200,000	Bechuana.	19, St. Swithin's-lane.
Bech. Trad'g Assoc.	1 1/16 1 3/16xd	1 1/16 1 3/16	1 0	10 p c May, 95	1 0 0	100,000	Bechuana.	19, St. Swithin's-lane.
Big Golden Quarry	2/6 3/	3/13/16 3/4⅝	5/-	—	0 5 0	483,726	Kaap River	4, Bishpsgte. st. Wn.
Block "B" Lang.	25/6 26/6	25/6 26/6	1 0	—	1 0 0	535,000	Rand	8, Princes-st . E.C. I
Boovsen Land . G	3⅜ 3¾	3⅜ 3⅝	1 0	—	0 12 0	95,000	Transvaal.	4, Tokenhouse-bldg
Brit. S. A. Char. ..	3 11/16 3 13/16	4⅛ 4¼	1 0	—	1 0 0	2,000,000	S. Africa	19, St. Swithin's-lane
Buffelsdoorn..... G	4⅞ 5⅛	5⅜ 5¾	1 0	—	1 0 0	250,000	Potchefstr	7, Lothbury.
Buluwayo Synd. ...	⅞ 1pm	⅞ 1pm	1 0	—	1 0 0	12,000	Matabele.	10, Helen's Place.
Cape Asbestos	2⅛ 2⅝	2⅛ 2⅜	1 0	—	1 0 0	50,311	Orange Rv	19, St. Swithin's-lane
Cape Copper .....G	1⅞ 2⅛	1 15/16 2 1/16	2 0	1/3 Dec. '94	2 0 0	300,000	Cape Col.	9, Queen-street-place.
Do. 6 % Pref. ...	2 2¼	2 2¼	2 0	1/3 Dec. '94	2 0 0	45,000	Cape Col.	9 Queen-street-place.
Cassel Colliery.....	4⅞ 5¼	4⅞ 5⅛	1 0	10pc June'95	1 0 0	75,000	Johannbrg.	99, Cannon-street.
Cen. Montrose... G	6/- 7/-	6/- 7/	1 0	—	0 18 6	69,000	Transvaal.	15, George st Mn. Ho.
Champ d'Or..... G	4 4¼	4¼ 4⅜	1 0	4/- Jan. 95	1 0 0	114,016	Rand	8, Old Jewry, E.C.
Champ d'Or Deep G	1⅜ 1⅝	1⅜ 1⅜	1 0	—	1 0 0	117,499	Rand	8, Old Jewry. E.C.
City and Suburb. G	24 24½	25¼ 25¾	1 0	25% Mar. '95	1 0 0	75,000	Rand	98, Gresham Ho., E.C
Coetzeestroom ...G	7/3 7/9	10/6 11/-	0 5	—	0 5 0	140,000	De Kaap	105, Leadenhall-street
Con. Bultfontein D	28/9 29/3	28/9 29/3	1 0	3½ % Sept. '94	1 0 0	721,500	Griqualnd	62, Lombard-st.
Con. Deep Levels G	4¾ 5	5¾ 5⅝	1 0	4/- June '94.	1 0 0	187,250	Transvaal	30, St. Swithin's-lane
Con. G. Fields S A.	8¾ 9 xd	9¾ 10 xd	1 0	5/- May '95	1 0 0	1,250,00	S. Africa	8, Old Jewry.
Do. 6 % Pref.	11⅛ 11⅝	22/8 23/6	5 0	—	1 0 0	1,243,999	S. Africa	8, Old Jewry.
Do. 5½ % Deben...	110 111	109 110	1 0	5¼ Jan, '95	5 0 0	600,000	S. Africa	8, Old Jewry.
Crown Reef .. ...G	9⅞ 10¼	10 10¼	1 0	25% June'95	1 0 0	120,000	Rand	120, Bishopsgt st Wn. I
De Beers Consol. D	20¼ 20⅜	20 1/16 21 1/16	5 0	12/6 Jan. '95	5 0 0	789,791	Transvaal.	62, Lombard-street.
Do. 5% 1st Deb....	102 103½	103 103	—	5% Jan. '95	—	£3,500000	Transvaal.	62, Lombard-street.
Do. 5½ % Bul. Ob.	103 104	103 104	—	5½ % Apr. 95	—	720,000	Transvaal.	62, Lombard-street.
Durban Roodept. G	7 7½	7 1/16 7 3/16	1 0	3/- Mar., '95	1 0 0	£125,000	Rand	28, Leadenhall-bldgs
Eastleigh .....G	1¾ 1⅞	1⅞ 2	1 0	—	1 0 0	240,000	Klerksdrp	Winchester House.
East Rand..... G	4 13/16 4 15/16	5⅜ 5¾	1 0	—	1 0 0	570,000	Rand	170, Winchester-ho.
Evelyn ..... G	1⅝ 1¾	1⅝ 1¾	1 0	10% Jan. '89	1 0 0	66,000	Rand	23, Old Jewry, E.C.
Exploration	1⅞ 2 p.m.	2 2½pm:	1 0	1/- Dec. '94	0 4 0	148,000	S. Africa	30, S. Swithin's-ln. I
Exploring Co.	6 6½	6⅛ 6¾	1 0	25/- Feb. '94	1 0 0	69,350	S. Africa	19, S. Swithin's-ln.
Ferreira .....G	16⅜ 17⅛	17⅛ 17¾	1 0	80% Mar. '95	1 0 0	45,000	Rand	120, Bishopsgt st. Wn. I
Forbes Reef (Nw)G	— —	— —	1 0	—	1 0 0	105,000	De Kaap	45-6, Leadenhall-st.
F Johnson & Co....	19/5 20/6	20/- 21/-	1 0	—	1 0 0	200,000	Mashonld.	8, Old Jewry I
Geldenhuis Deep G	8¼ 9	8¾ 9⅛	1 0	—	1 0 0	265,000	Transvaal.	30, St. Swithin's-lane.
Geldenhuis Est. G	6⅝ 6¾	6 15/16 7 1/16	1 0	6% April '95	1 0 0	187,500	Rand	120, Bishopsgt st. Wn. I
Do. Main Reef	24/6 25/6	24/6 25/6	1 0	5% Apr., 95	1 0 0	150,000	Rand	Warnford Court, E.C
George and May G	1 9/16 1 11/16	1 5/16 1 7/16	1 0	—	1 0 0	112,750	Rand	7, Great St. Helen's.
George Goch ...G	2 15/16 3 1/16	3⅜ 3¾	1 0	—	1 0 0	100,000	Rand	Johannesburg.
Ginsberg	1 13/16 1 15/16	2⅛ 2⅜	1 0	—	1 0 0	130,000	Drietfon.	Warnford Court, E.C.
Glencairn .....G	3⅜ 4	4⅛ 4¼	1 0	7½ pc Jan. 95	1 0 0	200,000	Rand	2, Drapers-gardens.
Gold Coast Devel.	7/9 8/3	7/6 8/-	—	—	—	—	—	11, Queen Victoria-st
Gold Estates T....G	12/- 13/-	12/- 13/-	1 0	15% Dec.'89	0 10 0	130,000	Transvaal.	46, Queen Victoria-st
Gld. Fls. Deep...G	5⅞ 6⅛	6⅛ 6⅜	1 0	—	1 0 0	600,000	S. Africa	8, Old Jewry.
G. F. of Mashonld.	⅜ ⅜	⅜ ⅜	1 0	—	1 0 0	200,000	Mashonld	19, St. Swithin's ln.
G.F.Tierrad' Fuego	3/9 4/3	3/9 4/3	0 4	—	0 4 0	400,000	Mozambiq	2, Tokenhouse Bldgs
Grahamstown .. G	17- 18/-	18/- 19/-	1 0	—	1 0 0	150,000	Rand	14, Throgmorton-st.

AFRICAN MINES—(Continued)

Name.	Closing Price, May 17, 1895	Closing Price, May 10, 1895.	Am't. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Graskop .....G	6/3 6/9	7/9 8/3	0 5	2½ % Mar. '92	0 5 0	400,000	Lydenburg	85, Gracechurch-st.
Griqualand W.... D	7⅜ 7⅝	7⅜ 7⅝	10 0	2 % Sept. '94	—	105,700	Transvaal .	62, Lombard-street
Guy Fawkes..... G	12/- 13/-	10/6 11/6	—	—	10 9 0	—	—	—
Gwelo Exploratn.	5/3 5/9	4/- 4/8	0 10	—	0 8 0	24,000	Manica.....	Broad-st. Avenue
Harmony (Pref) G	8/6 9/6	9/6 10/6	1 0	—	1 0 0	260,000	—	79½, Gracechurch-st
Henderson's Trans	3½ 3¼	4⅜ 5⅝	1 0	—	1 0 0	250,000	Zoutpar.bg	85, Gracechurch st.
Henry Nourse ...G	5¾ 6	6 1/16 6 3/16	1 0	—	1 0 0	100,000	De Kaap...	Warnford-court.
Joe's Reef .....G	⅜ 1	⅜ 1	1 0	—	1 0 0	57,404	De Kaap ..	21, Mincing Lane.
Johannesburg G.F	⅜ ⅝	7/- 8/-	1 0	—	1 0 0	99,537	Johanburg	31, Lombard st., E.C
Johannes. Invest.	4 4½	4 1/16 4 3/16	1 0	10 p c Dec. 94	1 0 0	650,000	—	7, Lothbury.
Johannesburg Par	5 5¼	5 5¼	1 0	12½ % Nov.,'93	1 0 0	21,000	Rand.....	Johannesburg.
Jubilee .....G	13⅛ 11	11¾ 12	1 0	30% April '95	1 0 0	30,000	Rand.....	8, Old Jewry. †
Jumpers .....G	4⅞ 5⅛	5 1/16 5 3/16	1 0	25% Dec. '94	1 0 0	100,000	Rand.....	120, Bishopsgt st. Wn. I
Kaffirs.....	¾ 1	¾ 1	1 0	—	1 0 0	80,000	Nrth. Kaap	3, Budge Row, EC
Kimberley .. ..D	par ⅛ pm	par ⅛ pm	1 0	—	0 10 0	98,672	Kimberley	19, Finsbury circus.
Kimberley Rdpt.....	4⅛ 4¼	4¼ 4⅜	1 0	—	1 0 0	125,000	Kimberley	2, Drapers-gardens.
Klerksdorp	23/6 24/6	30/6 31/6	0 10	—	9 8 0	400,000	—	110, Cannon St.
Koffyfontein.....D	1 5/16 1 7/16	1 7/16 1 9/16	1 0	—	0 5 0	50,000	Jacobsdaal	120, Bishopsgt st. Wn
Langlaagte Est. G	4 13/16 4 15/16	4 15/16 5 1/16	3 0	10 p.c. Mar.'95	1 0 0	467,000	Rand.....	59, Holborn Viaduct
Do. Royal	4 1/16 4 3/16	4¼ 4⅜	1 0	5% Sept. '93	1 0 0	100,000	Rand.....	2, Drapers-gardens.
Lionsdale	9/- 10/-	12/- 12/6	1 0	—	1 0 0	115,000	Lydenburg	85, Gracechurch-st.
Lisbon-Berlyn .. G	5/6 6/-	6/6 7/6	2/6	—	0 2 6	889,233	Lydenburg	110, Cannon-street
London & S. A. Ex.	11¾ 12¼	11¾ 12¼	0 10	3/- Mar. '95	0 10 0	100,000	S. Africa ..	19, Finsbury-circus.
Lower Roodepoort	6/- 7/-	13/- 12/6	1 0	—	1 0 0	150,000	Viakfontn	8, Old Jewry, E.C.
Luipaards Vlei Est.	18/6 19/6	22/- 23/-	1 0	6% Mar, '90	1 0 0	319,693	Rand..... ..	Warnford-court. I
Main Reef (New) G	1 7/16 1 9/16	1 5/16 1 11/16	1 0	—	0 10 0	300,000	Rand.....	8, Old Jewry.
Mashon. Agency...	2 5/16 2 1/16	3½ 3¾	1 0	—	1 0 0	100 000	Mashonald	8, Old Jewry, E.C.
Massi Kessi	9/6 10/6	9/6 10/6	0 10	—	0 5 0	60 000	Manica	Broad Street Avenue
May Con. (New) G	3½ 3¾	3 15/16 3 1/16	1 0	10 p c Apr. 95	1 0 0	430,000	Rand	4, Lothbury. I
Metropolitan (N) G	2¾ 2⅞	2⅞ 3	1 0	—	1 0 0	75,020	Rand.....	1, Crosby Square. I
Meyer & Charl....G	7⅜ 7⅝	7⅜ 7⅝	1 0	30% Dec., '94	1 0 0	71,687	Rand.....	Warnford-court. I
Modderfontein . G	14½ 14¾	16 1/16 16 3/16	1 0	—	1 0 0	200,000	Rand.....	Warnford-court. I
Montrose..... G	1 1/16 1 3/16	1 1/16 1 3/16	1 0	3/- Feb, '90	1 0 0	70,000	De Kaap ...	63, New Broad-street
Moodies G.&E....G	⅞ 1	1 1/16 1 1/16	1 0	-/4 May '90	1 0 0	240,000	De Kaap .	8, Old Jewry I
Mozambique.	29/- 30/-	34/6 35/6	1 0	—	1 0 0	400,000	S E. Africa	Broad-street House.
Namaqua C	⅞ 1⅛	½ ¾	2 0	2/6 July '91	2 0 0	94,351	Namaquald	34, Leadenhall-bldg.
New African	5⅛ 5¾	6¾ 7	1 0	—	1 0 0	190,000	—	83, Hatton Garden.
New Ariston.....	— —	— —	1 0	—	1 0 0	2 ,180	Klerksdorp	Winchester House.
New Aurora West G	— —	— —	1 0	5% Mar., '93	1 0 0	30,000	Rand.....	1, Crosby Square
N.Belgium Land...	7/16 9/16	7/ 8/	0 17	—	0 17 0	167,462	Waterberg.	53, Cornhill.
New Chimes..... G	2 15/16 3 1/16xrt	3 5/16 3 7/16xd	1 0	2/- Feb., '95	1 0 0	100,000	Rand.....	8, Old Jewry, E.C
New Clewer Estate	1⅛ 1⅜	1¾ 1⅞	1 0	10½ Feb. '95	1 0 0	100,000	Lydenburg	120, Bishopsgt st. Wn
New Crœsus..... G	2 1/16 2 1/16	2½ 2⅝	1 0	5 % Aug. '92	1 0 0	255,000	Langlaagte	120, Bishopsgt. st. Wn
New Gordon..... D	6/- 7/-	7/6 8/6	1 0	5% Dec. '89	1 0 0	404,344	Griqualand	110, Cannon-street.
New Heriot .....G	1 5/16 1 13/16	11 5/16 1 1/16	1 0	25 p c Mar. 95	1 0 0	83,750	Rand.....	96, Gresham Ho., E.C
New Jagersf.....D	9¼ 9½	10 10¼	5 0	10½ Mar., '95	5 0 0	100,000	Transvaal .	5, Copthall-buildings
N. Kleinfontein G	5½ 5¾	5 15/16 6 1/16	1 0	12½pc Mar,'95	1 0 0	82,500	Rand.....	Winchester House.
New LouisD'Or..G	2/6 3/6	3/3 3/9	1 0	—	1 0 0	—	Rand.....	53, New Broad-street
New Primrose ...G	6⅞ 7	7⅛ 7⅜	1 0	4/- April '95	1 0 0	278,750	Rand.....	2, Draper's-gardens.
New Rand.....	par ⅛ pm	par ⅛ pm	1 0	—	1 0 0	110,000	Rand..... .	Bartholomew-house
New RietfonteinG	3⅝ 3⅞	4 7/16 4 9/16	1 0	—	1 0 0	160,000	Rand.....	Warnford-ct., E.C.
NewS.AugustineD	12/- 13/-	14/6 15/6	0 19	—	0 19 6	239,137	Griqu'ld W	30-1, St. Swithin's-la
New Spes Bona...G	2⅞ 3	3⅛ 3⅜	1 0	—	1 0 0	113,701	Rand.....	24, N. John-st., L'pl
New Steyn Estate	1⅞ 2	2 1/16 2 1/16	1 0	—	1 0 0	125,000	Heidelberg	19, Bury Street. E.C
New Virginia ...G	1/- 2/-	3/3 3/9	0 10	—	0 10 0	48,335	Transvaal	26, Budge-row, E.C
Nigel ..... G	6¾ 7	7⅜ 7⅝	1 0	10% Mar. '95	1 0 0	160,000	Rand.....	98, Gresham Ho., EC
Nigel Deep .....G	2 1/16 2 1/16	2⅞ 3	1 0	—	1 0 0	195,000	Heidelberg	8, Old Jewry.
Nigel Extension ...	10/ 11/	11/3 11/9	10/-	10% June '95	0 10 0	160,000	Rand.....	Basing House, E.C.
North Sheba	7/6 8/6	6/- 8/-	—	—	—	—	—	88, London Wall.
Nourse Deep.....	5⅛ 6	5⅞ 6⅛	1 0	—	1 0 0	375,000	Rand.....	120, Bisnopgt.-st .Wn.
Nyassa (Bearer) ...	1 1⅛	1 1⅛	1 0	—	1 0 0	248,585	Mozamb'qu	Bartholomew House
Oceana	2⅝ 2¾	3 3⅛	1 0	25/- Nov.'89	1 0 0	326,000	Transvaal .	4, Sun Court, h C
Oceana Developmnt	1⅜ 1 11/16	1 5/6 1 11/16	1 0	—	1 0 0	50,000	Transvaal .	4, Sun Court, E.C.
Ophir Concess. ...	4/ 5/	5/9 5/9	1 0	—	0 18 6	111,857	E. C.Africa	31, Lombard-street.
Orange F.S.E. ...D	4¾ 5¼	4¾ 5¼	1 0	12½ % May 95	1 0 0	284,000	Orange F.S.	10, Moorgate-street.
Orion..... G	3 1/16 3 5/16	3⅛ 3⅜	1 0	10 % Mar. '95	1 0 0	30,000	Rand.....	8, Old Jewry.
Otto's Kopje..... D	6/- 6/6	6/3 6/9	1 0	—	1 0 0	437,888	Kimberley	110, Cannon-st., E.C.
Paari Central ... G	1 1/16 1 3/16	1⅝ 1⅞	1 0	—	1 0 0	138,750	Transvaal .	120, Bishopsgt st. Wn.
Pardy's Mozambq.	2⅜ 2⅞	2½ 2⅝	0 10	1/- Jan. 95	0 10 0	13,000	S.E. Africa	Broad St. Avenue.
Pardy's Range	10/6 11/	10/6 11/-	0 10	—	0 10 0	—	Manica.....	Broad St. Avenue.
Pigg's Peak ..... G	⅞ 1	1 1⅛	1 0	—	0 17 6	200,000	Swaziland .	6, Queen-street-place
Pigg's Peak ..... G	— —	— —	1 0	—	0 17 6	60,652	Swaziland .	6, Queen-street-place
Pleiades.....	1 1/16 1 3/16	2 1/16 2 3/16	1 0	—	1 0 0	140,000	Black Reef	—
Potchefstroom... G	1 1/16 1 3/16	1 5/16 1 7/16	1 0	—	1 0 0	389,750	Potchefstm	19, Bury-st., E.C.
President Land ...	5/3 5/9	5/3 5/9	1 0	—	1 0 0	193,325	Transvaal .	17, Basinghall Street
Princess Estate G	2⅞ 3	3 1/16 3 3/16	1 0	—	1 0 0	125,000	Rand.....	33, Cornhill, E.C.
Randfontein ..... G	38/6 39/6	42/6 42/6	1 0	—	1 0 0	2,000,000	Rand.....	59, Holborn Viaduct. †
Rand Mines ..... G	30 1/16 30 3/16	31 1/16 32 1/16	1 0	—	1 0 0	332,798	Rand.....	120, Bishopsgt st. Wn. I
Rand-Rhodesia ...	2¼ 2⅜	2 1/16 2 1/16	1 0	—	1 0 0	25,000	R&Rhodesa	Warnford court, E.C.
Read's Drift .....D	1⅝ 2	1⅞ 2⅜	1 0	—	1 0 0	37,000	Transvaal	19, Finsbury circus.
Rhodesia Explo ..	9 1/16 10 1/16	8¾ 9	1 0	—	1 0 0	50,000	Mt &Mash'l	8, Old Jewry.
Robinson .....G	8 9/16 8 11/16	8⅞ 9⅛	5 0	5/- Jan. '95	5 0 0	550,000	M. Rf.'rand	28, Austin Friars, E.C
Roodepoort Deep	3 15/16 4 1/16	4 1/16 4 1/16	1 0	—	1 0 0	170,000	Rand.....	8, Old Jewry, E.C.
Roodepoort (Kim.)	3⅝ 3⅞	4¼ 4⅜	1 0	—	1 0 0	100,000	Rand.....	7, Lothbury, E.C.
Roodepoort Un. G	4¾ 5⅛	5⅝ 6	1 0	10p.c. Dec. '94	1 0 0	300,000	M. Rf.'rand	30-31, 8, Swith's. lane.
Rose Deep	15/16 1 1/16	1 5/16 1 7/16	1 0	—	1 0 0	60,000	Krugersdp	4, Tokenhouse bldgs.
Rosenbloek Tw'Rfs	5½ 5⅝	5 11/16 5 13/16	1 0	—	1 0 0	98,000	Rand.....	96, Gresham Ho., EC
Salisbury Gold ...	1¾ 1⅞	2 1/16 2 3/16	1 0	1/- Sept. '94	1 0 0	850,000	Lydenburg	19, S. Helen's place.
Sheba .....G	10/- 11/-	9/- 10/-	1 0	—	0 18 6	119,000	Zoutpan'bg	4, Sun Court, E.C.
Sliati .....G	14 3/16 14 5/16	14¾ 15	1 0	10% Feb. '95	1 0 0	250,000	Rand.....	8, Old Jewry.
Simmer & Jack...G	7¾ 8	8 5/16 8 7/16	1 0	6/6 Jan. '95	1 0 0	250,000	S. Africa ..	8, Old Jewry.
S. A.Gold Trust ...	7/ 8/	8/6 9/	1 0	—	1 0 0	120,000	Elandsfont	6, Great St. Helen's
Southern Geldnus.	15/ 16/	18/- 17/-	0 15	—	0 15 0	80,000	{ Giqld. W	19, St. Swithin's-ln.
Southern Land.....	14/ 15/	14/- 15/-	1 0	—	1 0 0	20,000	{ &B. Beech	19, St. Swithin's-ln.
Southern Land.....	2¼ 2⅝	2⅝ 2⅝	1 0	—	1 0 0	158,000	Rand	Winchester House.
South West Rand ..	1¾ 1⅞	1 15/16 1 15/16	1 0	—	1 0 0	99,070	Lydenburg	15, Bishopsgt-st, Wn.
Spitzkop (New) G	1 13/16 1 15/16	1⅞ 2

for this distance has widened to nearly 6 feet, and though part is barren, the whole will, I think assay 1 ounce of gold per ton. The level to the south east will be started this week.—Quartz at surface. There is at present 50 tons at the underlay shaft, 45 tons at the Stray Shot battery waiting crushing, and 42 tons have been carted to the mill.—Well. This had reached a depth of 50 feet on the 8th. I have arranged a contract for another 50 feet at £3 12s. per foot, sinking to be discontinued when the supply of water is sufficient to prevent work. After this a pump must go in, and sinking on fresh terms carried on until the supply is sufficient for all purposes. I expect to meet water at about 75 feet.—Office note: A cable, dated April 26, notified that water had been struck. — March 17. West Mallina: I am still driving to the north in the Brilliant. I am 20 feet in, but there are no signs of the reef yet, as I do not expect to strike it till I get 40 feet in with the drive. I am still sinking the new shaft. As for the Corporation, it is continuing about the same width.—March 28, Mallina: Received your letter and exemption paper, which I will post up as you desire. I was very much disappointed at the mine being shut down for so long, as the main reef was much improved at water level. I bailed out main shaft. The inflow of water is about 3 to 400 gallons an hour. I then started to drive on main reef at water level; the reef is much larger and more defined at this point; in fact, in a short time I could have got 100 tons of good stone at grass. The same reef, 120 feet east of main shaft, has much improved, as the sandstone horse that divided it into two parts from the surface, cut out, and the reef is very compact about 2 feet. - Peawah Since writing last, I have been getting all ready to drive on the two reefs. I am only awaiting the windlass irons. I am sinking on the main reef 120 feet to the east of the main shaft, and hauling the dirt by hand. The stone is improving as it goes down, as it does also in the main shaft. I have also sunk 10 feet, now in the reef to the north of main reef. This reef was sunk on 30 feet, when it broke up into about 20 leaders. I sank a further 10 feet on it, and it came together again and prospects very well.

NAMAQUA.—Abstract of superintendent's report for March: Tweefontein Mine. 125 fathom level east. This level is on the line of lode, showing a well defined wall, and containing a little copper ore.—115 fathom level east. The ore taken from this driving during the month has been of better quality, although the part of the lode now being carried is not quite so broad as it was. Worth 6 tons of ore per fathom.—105 fathom level east. The forebreast is at present of no value, and it has been suspended until a winze has been sunk through to the 115 fathom level. The winze is expected to open up a valuable section of ground. Worth 4 tons of ore per fathom.—105 fathom level west. There is no change at this point.—95 fathom level west. The lode here remains of about the same value. The No. 30 winze having been holed, there is now good ventiliation. Worth 5 tons of ore per fathom.—85 fathom level west, No. 30 winze. The value and appearance of the lode in the winze is identical with that in the 95 fathom level. Worth 5 tons of ore per fathom.—85 fathom level west and crosscut south. The lode at this point is about 2 fathoms in breadth, and contains ore throughout, but not in large quantities, and it is much mixed with iron. Worth respectively 2 tons and 3 tons of ore per fathom.—New shaft. 25 fathom level west. The part of the lode carried has not been of so much value during the month. The ground driven through, however, is of fairly good stoping value. Worth 7 tons of ore per fathom.—Stopes. Bottom of 95 fathom level east. Bottom of 95 fathom level west. Bottom of 105 fathom level west. The stopes have yielded well during the month, and are worth respectively 10, 10, 7, and 10 tons of ore per fathom.—In the back of the 25 fathom level west. This stope is without change, and is worth 10 tons of ore per fathom.—No. 4 shaft. Good progress has been made in sinking this shaft, and it will probably be completed to the 25 fathom level during May.—Shipping. The *Glanrafon* and *Hinda* arrived at Port Nolloth to load on April 15. The *Andaman* left Port Nolloth for Swansea on May 1 with about 1350 tons of ore.—Output for April. 500 tons of ore of 26 per cent.

SEGOVIA GOLD.—The mine superintendent reports under date March 20, as follows:—After a run of 742 hours the sluice and undercurrent were cleaned up, giving 52 ounces of gold, which has has been valued at $1040, or about £208, and the total cost is probably under £200. The royalty due to the lessor has also to be taken into consideration. There is a great want of pressure, and arrangements have been made to procure further pipe to meet this difficulty; unfortunately the present disturbed state of the country renders it impossible to carry out these arrangements. Judging from the gravel in the old slide, I believe there would be no necessity of undercutting the bank, but I find, although the gravel is exceedingly soft, it will have to be undercut, and to do this it is absolutely necessary to have a great pressure than can be obtained with the pipe at present on the mine; in fact, I have instructed Mr. Carleton in no case to attempt to work the banks, as with our present pressure this could only lead to disaster. There is work to be done on another large slide which I hope will open up at another part of the main bank. The ditch will probably give at least as much trouble for several runs as for the last; but after the first year there should be little cause for complaint from this cause. If enough gold can be taken out of the old slides to pay expenses for the next few months, it is as much as can be hoped, and more than should be expected.

YERRAKONDA.—Fortnightly report of Captain M. Scantlebury, mine agent, dated May 1: Beresford's shaft has been sunk 9 feet 6 inches, now 19 feet 6 inches below the 300 feet level. The lode is 6 feet wide, 4 feet of which is solid quartz. We occasionally see quartz showing visible gold, but the samples, with the exception of the last day or two, have been low. To quartz, at present, for a width of 4 feet, is worth 6 dwts. of gold to the ton. 300 feet level north has been extended 6 feet 6 inches, now 115 feet 6 inches from shaft. The lode is 4 feet wide, assaying 3 dwts. 6 grains of gold to the ton. A week since we removed the rockdrill here to drive the crosscut from the 200 feet level north to communicate with the new engine shaft. Crosscut west 200 feet level north has been extended 8 feet, now 8 feet. We have about 60 feet to drive to communicate with the new engine shaft. Rise above 200 feet level north has been put up 4 feet, now 48 feet 3 inches above the level. The lode is split up, and poor, and this is suspended. We have been cutting out the lode in the end of rise, but find it of too low grade to pay for stoping. New engine shaft has been sunk 9 feet, now 183 feet from surface. The water is very quick, but when the crosscut from the 200 feet level north of Beresford's is holed to this shaft most of the water can be taken up and carried to the pumps in Beresford's.—South shaft has been sunk 14 feet, now 96 feet from surface. The lode is 4 feet wide, 3 feet of which is solid quartz, assaying 7 dwts. of gold to the ton. During the past 24 hours we have milled 12 tons of the quartz from this shaft, and obtained, as near as possible 6 dwts. of gold to the ton. The quartz is free milling, and I hope and expect in a few feet more sinking to see an improvement in value. The water is fairly quick, and we are getting on with the pumping engine as fast as we can.

APPANTOO.—Mine report:—Cawston's shaft, No. 1 level. We have driven east 38 feet on lode, the average width of same being 10 to 11 feet. We have cut in some old native workings on the footwall of reef and intend to clear same to surface so as to make an airway which will save us eventually putting down an airshaft. Value of reef running from 1 ounce to 1½ ounce to the ton. We have driven west on lode 22 feet, the average width of same being 12 feet. Here also we have come into native workings which we intend to clear to surface for an airway. Value of reef from 1 ounce to 1½ ounce to the ton. As soon as the rock drills are working we shall be able to break a very large quantity of ore. We are preparing to put in the shaft wire rope guides, and will then haul the trucks to surface.—No. 2 level. We expect to cut reef in ten days. On doing so development will be pushed ahead. The rock-drills will here also enable us to to break large quantities of ore.—Worgent's tunnel. We have driven 260 feet here, and have this week stopped driving, having come into a large body of decomposed shale and country carrying little or no quartz. At 140 feet in we have commenced a crosscut, and intend driving across country to cut the main lode.—George's tunnel west. We have driven 120 feet. The lode has pinched this last week, and is now making big again. Value of reef 10 to 15 dwts. Essien's east. We have driven 128 feet. No change.—Essien's west. We are clearing the drive and putting in new timbers. The air is now good, having an air shaft through to George's west. We expect to be working on the face again in 10 days time.—Adit shaft. We are preparing bottom of shaft for driving crosscut to reef. Expect to continue crosscutting in a week's time. Harvey's shaft is collapsing and is abandoned. Driving west from Cawston's; will work out all quartz left here.—W. H. Swift, April 8.

THE SAN JORGE NITRATE COMPANY (LIMITED).—The annual meeting of this company was held on May 15.—In moving the adoption of the report, the Chairman (Mr. Robert Harvey) remarked that the gross profit for the year amounted to £114,902, or over 30 per cent. of the capital of the company, as compared with £74,043 in the previous year. They must not forget, however, that in 1893 they worked for seven months only, as the combination for the limitation of the output of nitrate was then in existence, while in the year under review they worked the full twelve months. The increase in the profits over 1893 was 55 per cent., which showed that a combination for limiting the output of nitrate did not mean necessarily an addition to their earnings. However good a limitation of the output might be for the nitrate trade in general, it was not without its disadvantages to their own company. The substantial sales they had effected in advance already enabled them to pay their interim dividend, and they had the cash in hand for the purpose. The reserve fund now stood at £50,000, and, after paying a dividend for the whole year of 50 per cent, against 17½ per cent. last year, there was left to be carried forward £13,053. In renewing their contract with the Nitrate Railways Company they had obtained a reduction in the cost of carrying their nitrate from 9¾d. to 8d. per quintal. Referring to the life of the oficina, he said the board had assured themselves that they had sufficient caliche in sight to last at least eight or nine years. The motion was carried.

TIGERFONTEIN GOLD MINES (LIMITED). — An extraordinary general meeting of this company was held on Thursday, at Winchester House, Old Broad-street, E.C.—Mr. John Secar presided, and stated that the property had been transferred, and a committee appointed to manage the property in South Africa. The company's property at Tigerfontein was freehold, and at a time when it was believed Tigerfontein was about to be proclaimed as a public gold field 90 claims were located. No such step had, however, been taken, and the company was, therefore, in usual owner's position as regards mining rights over the whole of the property acquired by them. The property now under offer was situated about 20 miles due south of Johannesburg, south-east of the Klerksdorp and in the Potchefstroom district. The preferential mineral rights to be secured by their adoption of the contract now submitted was over such a large area that the probabilities of prospecting and development would prove them owners of one of the largest mining properties in South Africa. If the agreement before them was ratified under the arrangements they had made the company would be in a very strong position financially. Its total issued capital would be £125,000, £70,000 of which would be represented by cash. He concluded by moving a resolution approving of an agreement between W. Y. Campbell and the company, and increasing the capital to £125,000 by the creation of 75,000 new shares of £1 each. The resolutions were seconded and carried.

THE GESNER PROCESS FOR PRESERVING IRON AND STEEL FROM RUST.—The *Revue Scientifique* describes the Gesner process for preserving iron and steel from rust. It consists in forming upon the surface of the metal a double carbide of hydrogen and iron which resists all mechanical action, and does not alter the form of the objects treated in this way, which may be bent with impunity to an angle of 45°, or, if they are nuts, will turn as easily upon the thread as before. The articles should previous to the process be freed from all scale, but the removal of oil and grease is not indispensable. Two ordinary gas retorts, of convenient length, are placed side by side, and carried to a temperature of from 1382° F. to 1607° F., according to the nature of the objects to be treated, which are placed in the crucibles and allowed to remain there for 20 minutes, or until they attain the same temperature. A current of hydrogen is made to pass into the retorts for about 45 minutes, and then a small quantity of naphtha is allowed to run in for about ten minutes, after which it is discontinued, but the hydrogen kept in circulation for 15 minutes longer. The objects remain in the crucible sheltered from the air until the temperature has fallen to about 1022° F., when they may conveniently be removed. The colour of the article so treated is a dark-blue. Tempered metal is not adapted to this process, but in some cases tempering may be done afterwards. Grating tubes, &c., can be treated very easily.

THE NIGEL DEEP (LIMITED).—The London agents of the above company have received advice from the head office in Johannesburg, by cable, that the resolution submitted to shareholders at the special general meeting held at the offices of the company, in Johannesburg, on the 25th April, was adopted as follows:—That the capital of the company be increased from £200,000 (of which £195,000 is issued) to £500,000 by the creation of £300,000 additional shares of £1 each, to be applied as follows:—1. To the owners of certain claims, approximately 391 in number—namely, 189 claims, called the Osborne Block, 30 claims called the Tonkin Block, 34 known as the North West Nigel, 26 as the Bruce Block, 28 as the W. Joel Block, and 84 claims known as the Nigel Consolidated Deep Level Gold Mining Company (Royal Nigel and Geordie Blocks) fully paid shares of £1 each.—2. For providing £100,000 working capital, 100,000 shares to be offered in the first instance to the shareholders of the amalgamated companies (viz., 400,000 shares) at par *pro rata* to their holdings, and the issue of which will be guaranteed by the principals at par, making together with the present issued capital of the company a total of £500,000.

Cassel Colliey Company.

The report for the six months to March 31, states:—"Your directors are pleased to record a steady improvement in the affairs of the company, both as regards business done and profits earned. The output of coal for the six months is 94,732 tons, as against 66,563 tons for the previous half-year, showing an increase of 40 per cent., and the profit for the same period amounts to £15,893 16s. 9d., compared with £7276 19s. 2d., an increase of 109 per cent. The quality of the coal now being opened up is superior to what has been met with before in the mine. The development is nearly two years in advance of the output, and your mine is in a splendid condition to supply all demands, and hold its own against competition. The financial position of the company is extremely statisfactory, its liquid assets amounting to £17,541 12s. 10d., after payment of a dividend, as against £12,369 on September 30 last, and the payment of regular dividends is now assured."

SULPHUR.—A company has been formed in Palermo with a capital of £20,000, to be known as the Societa dei Magazzini Generali per gli Zolfi (General Sulphur Store).

THE EFFECT OF ARSENIC ON STEEL.*

By JOHN EDWARD STEAD, F.I.C.

THE investigations, communicated to this Institute, made by Messrs. F. W. Harbord and A. E. Tucker to ascertain the effect of arsenic on steel, are conclusive that a large amount is objectionable. Their results, however, do not prove that small quantities are harmful; in fact, the effect of small quantities of arsenic has not been thoroughly investigated, and the impression generally exists that, if a large quantity is injurious, a small quantity must necessarily be proportionately so. In order to show that such an hypothesis is not necessarily sound, reference must be made to the effect of manganese upon steel, which has been so exhaustively studied by Mr. Hadfield.

In the paper read before this Institute by that gentleman, the following results are recorded—viz:—

Table I.

Analyses.			Tested in the Natural State.		
Carbon.	Silicon.	Manganese.	Tensile.	Elongation.	Contraction at the Point of Rupture.
			Tons per sq. in.	Per Cent. in 8 in.	
Per Cent.	Per Cent.	Per Cent			Per Cent.
0·20	0·03	0·83	33	31	46
0·40	0·15	2·30	56	6	7
0·40	0·09	3·89	38	1	none

From which it would appear that although between 2 and 4 per cent. of manganese affects most injuriously the property of the steel, an amount approaching 1 per cent. does not appear to have a relatively harmful influence, and, in general, users of steel do not object if the material they buy contains between 0·25 per cent. and 1 per cent. of that element, although they know that 4 per cent. of it will make the steel little better than white cast-iron. As, however, the impression obtains that arsenic, even in very small quantities, is injurious, engineers, who are responsible for the safety of thousands of human beings scattered over the whole world, with creditable caution, prefer to have structural steel as free from it as possible.

With this unsettled and unsatisfactory position of the arsenic question, it appeared to be desirable that systematic trials should be instituted to determine on a sufficiently large scale as to what effect, if any, small quantities of arsenic really have upon steel, and whether or not it is at all comparable with manganese.

With this object in view, I approached Mr. David Evans, of Middlesbrough, and after explaining how necessary the investigation was, he at once agreed with me, and offered to assist me in its attainment. As a result, several charges of steel have been made at the Eston Steel Works under my own superintendence and direction, containing between 0·1 and 0·25 per cent. of arsenic, and the material has been most carefully tested both chemically and mechanically, and it is the results obtained which practically constitute this paper.

At the outset, I must acknowledge that excepting for the valuable aid given by Mr. David Evans, and his assistants, Mr. George Bellwood, Mr. Arthur Richards, Mr. E. H. Cook, Mr. Campbell, and others, at the Eston Steel Works, also by Messrs. J. H. Andrew and Co., Mr. W. D. Houghton, Messrs. Richard Hill and Co., and Messrs. Cradock and Co., Mr. George Ainsworth, and Mr. Fred. Walker, of the Consett Iron Works, it would have been impossible for me to have commenced this investigation.

System of Investigation.

In making comparative trials with different separate charges of steel, in which the effect of an addition of any given element has to be determined, the difficulty has always been to obtain the parallel charges of such close approximation in chemical and mechanical properties as to be of any use whatever.

It is well known that although, for all practical purposes, a consecutive number of charges, both from open-hearth and Bessemer furnaces, may be classed as identical material, yet there are often variations in the mechanical properties of from 4 to 6 per cent., differences which, although practically negligible, are prohibitive in a scientific research in which the effect of an element added may not cause any deviations, or deviations not exceeding such differences. It became clear, therefore, that unless we were prepared to make several series of trials, in each of which (say) 50 or 60 separate charges were made, half of which were normal and half were treated with arsenic, and to test them all and average the results, the separate charge system would, if confined to a few charges only, be of no practical value whatever; and as it is not advisable, for many practical reason, to experiment on such a gigantic scale in order to obtain average results, the method of splitting or dividing the steel when in a molten state was devised, one portion in each series being allowed to pass on without any addition, whilst the other was treated and mixed with a definite weight of arsenic.

By this system it is possible to determine with a fair degree of accuracy in a single charge the disturbing influence of even small additions of an element.

In practically carrying out the experiment in each trial, a separate special ladle was prepared, and after the whole charge of steel in the main ladle was ready for teeming, a sufficient quantity to fill one ingot mould was run off into the smaller ladle, and at the same time the necessary amount of metallic arsenic in coarse powder was made to mix with it by simply throwing it into the liquid stream of steel as it passed into the ladle. Combination was instantly effected, and a very little arsenic was volatilised.

The force of the falling stream of steel produced efficient mixing, but on pouring into the large ingot mould, the agitation and churning effect made the mixture more perfect.

The arsenical ingots produced weighed about 2½ tons, and were of the same weight as the other ingots to which no arsenic had been added.

This system, although as nearly perfect in theory as could be devised, failed in some cases, especially in No. 2 series, to give ingots exactly of the same composition as regards the carbon, manganese, &c., but the differences were not so great as to vitiate the results.

Three acid Bessemer ingots were made, containing respectively about 0·10, 0·15, and 0·25 per cent. of arsenic; two acid open-hearth ingots, with about 0·14 per cent. of arsenic, and one basic Bessemer ingot with about 0·10 per cent. of arsenic. In addition to these, several small ingots containing from 0·25 to 1·5 per cent. of arsenic were made by adding metallic arsenic to small ladles charged with fluid basic steel.

The method used for the determination of arsenic in my laboratory is one originally proposed by Emil Fischer, but as I could not find any detailed directions for working it, I was obliged to work out the details, and as it has been proved to be so simple, rapid, and accurate, I have given it in detail in the appendix. When I explain that by its aid it is easy to make a test in two hours, and to determine so small a quantity as 0·002 per cent. of arsenic in steel, I think chemists will recognise its value.

* Paper read before the Iron and Steel Institute.

(To be continued).

ALAMILLOS.—Mine report dated May 8: In the 85 fathoms level driving west of Taylor's engine shaft the lode is small, and does not contain much lead. The lode in the 160 west of the same shaft is large, and produces good stones of ore, and is valued at ½ ton per fathom. In the 100 east of Judd's engine shaft the lode continues unproductive. The stopes continue to yield well. Surface works are kept on with regularity, and the machinery is in good working order. We estimate the raisings for May at 250 tons. The tributers' returns amounted to 35½ tons of ore in the past month.

BALAGHAT-MYSORE.—Captain Jos. Pryor, May 1: Ogle's shaft. The crosscut east at the 270 feet level south of this shaft has been driven 16 feet 9 inches, or 122 feet from the level. We have not met with anything of a very particular value since the last report.—Tennant's shaft. This shaft has been sunk 14 feet, or 76 feet below the 500 feet level. The ground now being passed through is still unproductive. The crosscut west of the shaft at the 500 feet level has been extended 18 feet 3 inches, or 97 feet 9 inches from the shaft. The 500 feet level north has only been driven 3 feet 3 inches, or 113 feet 9 inches from the shaft. The lode is about 4 feet wide, but as yet it only yields a little quartz, the assay value of which is 4 dwts. 13 grains per ton. This end has been suspended for a while that we might effect a communication with the winze from the 420 feet level, a crosscut east, and which has been advanced 14 feet 7 inches. We hope to communicate shortly. The 420 feet level north on the western part has been extended 35 feet 6 inches, or 168 feet 9 inches from the shaft. At about 30 feet behind the present end the lode only yielded quartz of about 1 foot wide, but from this place it began to considerably improve, and to-day the quartz is from 5 to 6 feet wide, and of an assay value for the above distance varying from 3 dwts. to 10 dwts. per ton. The last sample gave a result of about 5 dwts. per ton.

CAPE COPPER.—Captain Henwood, March 31; Ookiep. We have started a winze below the 130 fathom level at the point where the 130 fathom dividing from new shaft intersected the east and west joint. The ground in bottom of sink is yielding a little saving stuff. The rock in the 92 fathom crosscut south of main east level is composed chiefly of gneiss. The 92 fathom level west of south crosscut (south of 46 winze) is still producing occasional stones of copper ore. The 58 fathom level west of the old shaft is still in massive quartz. Nothing but a few stones and spots of copper ore having been met with of late in the 48 fathom crosscut north on the flookan course it has been suspended, and the men are put to cut out the east side of level to ascertain if any productive ground has made in that direction. The stopes throughout the mine are, on the whole, yielding their usual quantities of copper ore.—Captain Henwood, March 31: Trial Mines. Nababeep South. The rock in the 74 fathom level north east of shaft is still containing fine specks of copper ore, and the 55 fathom crosscut north of No. 1 winze is again yielding rich stones of copper ore. —Spectakel. The ground in the 46 fathom crosscut north on the flookan course is good for progress, and is favourable for copper ore. The stopes throughout the mine are yielding about the same as last month.—Copperberg. The stope in back of adit level in No. 1 south crosscut is yielding fully 3 tons of copper ore per fathom. We have started to drain the water from the old working to the 10 fathom level. The rock in the 30 fathom crosscut south of No. 1 trial shaft is composed chiefly of quartz, and the ground in bottom of No. 2 trial shaft contains spots of copper ore.—Ookiep east. The rock in the 80 fathom level east of south-east crosscut not looking very favorable for copper ore, it has been suspended. In the latter part of the month we started a sink in the bottom of the stope below the 66 fathom level, to ascertain if the productive ground is making westward in depth.—Returns for March. Ookiep, 2200 tons of 20 per cent; Spectakel, 130 tons of 28 per cent.—Arrival at Port Nolloth. The *Andaman*.—Tilt Cove. East Mine. Output for March, 5150 tons of 3·76 per cent. wet assay.

FORTUNA.—Report dated May 8: Canada Incosa mine: In the 110 fathoms level driving west of San Pedro's shaft the lode continues regular and well defined, and is valued at ½ ton per fathom.—Los Salidos mine. The lode in the 200 driving east of Taylor's engine shaft is large, but does not contain sufficient ore to value. In the 105 east of Palgrave's shaft the lode contains some good stones of ore. No change of importance has taken place in the stopes since last reported. The works at surface are kept on with great regularity, and the machinery is in good working order. Estimated raisings for May, 225 tons. The tributers returned 60 tons of mineral in the past month.

LINARES.—Mine report dated May 8: Pozo Ancho Mine. Peill's engine shaft. In the 200 fathoms level driving south the men continue to carry on the work very satisfactorily. The lode in the 200 west has improved in value and has a promising appearance, and is estimated at ¾ ton per fathom. In the 155 west the lode has declined in value. The lode in the 178 west of Warne's crosscut continues strong and productive, and is valued at 1½ tons per fathom. The stopes continue to yield well. Surface works are kept on with great regularity, and the machinery is in good working condition. Estimated raisings for May 200 tons. The tributers returned 121¾ tons of mineral in the past month.—Los Quinientos Mine. Taylor's engine shaft. In the 185 east the lode is small, and does not contain sufficient ore to value. The lode in the 165 east continues to lay open good stoping ground, and is estimated at 2 tons per fathom. In the 150 east the lode is large, and produces some stones of ore. The lode in the 130 east is small and unproductive. Isidoro's winze sinking below the 150 fathom level is going down through a very rich lode, valued at 4 tons per fathom. Estimated raisings for May, 150 tons. The tributers returned 61 tons of mineral in the past month.

MYSORE REEFS (Kangundy).—Fortnightly report of Captain Scantlebury, dated May 1: Underlie shaft. This shaft has been sunk 7 feet 3 inches, now 46 feet below the 325 feet level. The quartz is 9 inches wide, and worth 10 dwts. of gold to the ton. Level south from bottom of winze has been extended 2 feet, now 26 feet, and is communicated with the shaft. Level north of winze has been extended 9 feet, now 9 feet from winze. The quartz is 2 feet wide and worth 18 dwts. of gold to the ton. 325 feet level north has been extended 11 feet 6 inches; now 135 feet 6 inches from shaft. The lode is wide, but in a disturbed state. We have branches and patches of quartz, but of no value. We shall soon be in better ground. Stopes in bottom 325 feet level north. The quartz is 14 inches wide, assaying 1 ounce 4 dwts. of gold to the ton. Stope in back 325 feet level north, south of rise, the quartz is 15 inches wide, assaying 10 dwts. of gold to the ton.—Stope north of rise. The quartz is 12 inches wide, assaying 12 dwts. of gold to the ton.—Vertical shaft. The 260 feet level north has been extended 13 feet 6 inches, now 120 feet 6 inches shafts. The quartz is 2 feet 6 inches wide, assaying 8 dwts. of gold to the ton. Winze below this level has been sunk by hand labour 3 feet 6 inches, now 12 feet 6 inches below the level. The quartz is 3 feet 6 inches wide, assaying 13 dwts. of gold to the ton. Winze below the 200 feet level south has been deepened 3 feet 9 inches, now 59 feet 9 inches below the level. The quartz is 15 inches wide, and worth 12 dwts. of gold to the ton. Trial shaft south has been sunk 13 feet, total depth 13 feet. The quartz is 15 inches wide, assaying 4 dwts. of gold to the ton. I am only working one shift of men here. This shaft is 2300 feet south of the underlie shaft, and is being sunk on the same lode. The rock is very hard, but the quartz is regular, and I fully believe it will improve in value as depth is attained.—Surface. We have commenced to construct a bund in the valley to make a reservoir for water. It does not seem that we are going to get much in the shafts. We shall undoubtedly get it when we reach an easier channel of ground, but when this will be no one knows. Preparations must be made to secure a water supply.

NIGEL EXTENSION.—The manager reports that he has struck a rich well-defined reef, 25 feet in width, on the upper portion of the property. Mr. E. Bates Dorsey, the expert who has been retained to advise on the systematic development of the estate, is now on his way to South Africa, and will report fully on this new discovery.

NUNDYDROOG.—Report for the fortnight ending April 27: Taylor's shaft has been sunk 7 feet, total depth 67 feet below the 1160 feet level. Lode 3 feet wide, assaying 5 dwts. per ton. The 1160 south has been driven 14 feet, total distance 53 feet 6 inches. Lode 6 inches wide, assaying 3 dwts. 3 grains. The 1160 north rise has been put up 11 feet, total distance 11 feet. Lode 1 foot wide, assaying 2 ounces 8 dwts. 18 grains. The 1000 north rise has been put up 13 feet 6 inches. Lode 2 feet 6 inches wide, assaying 5 dwts. In three stopes in the back of the 760 north the lode has averaged 2 feet 10 inches in width, and 1 ounce 8 dwts. 8 grains in assay value. The lode in the stope in the bottom of the 680 north is 2 feet wide, and assays 8 dwts. 18 grains, and in the stope in the back of the 600 north is 2 feet wide, worth 16 dwts. 6 grains. In two stopes in the bottom of the 520 north the lode averages 2 feet in width and 9 dwts. 9 grains in assay value. The 450 north intermediate drivage has been extended 4 feet. Lode 2 feet wide, assaying 5 dwts. The lode in the stope in the bottom of the 370 north is 1 foot wide, and assays 6 dwts. 6 grains.—Main shaft. The 1080 level south has been driven 12 feet 6 inches, total distance 33 feet 6 inches. Lode 1 foot 6 inches wide, assaying 2 dwts. 12 grains. The 1080 north has been driven 14 feet, total distance 36 feet. Lode 1 foot wide, assaying 3 dwts. 18 grains. The 1000 north has been driven 7 feet 6 inches, total distance 198 feet. Lode 1 foot wide, of no value. The 920 north, No. 2 rise, on the crosscourse has been put up 12 feet 3 inches, total height 83 feet 9 inches, and communicated with the 840 feet level north. The lode in the stope in the back of the 920 south is 6 feet 6 inches wide, and assays 2 ounces 12 dwts. 12 grains. The 840 north has been driven north-east on the crosscourse 9 feet, total distance 102 feet, and a communication has been effected with the rise from the 920 north. In the stope in the back of the 840 south the lode is 6 feet 6 inches wide, assaying 8 dwts. 18 grains, and in the stope in the bottom of the same level it is 3 feet wide, assaying 1 ounce 5 dwts. Crosscut east from the 680 north has been extended 18 feet, total 353 feet. A change of ground has occurred, and water is issuing from the forebreast. The 520 has been extended eastward on the crosscourse 30 feet, total distance 230 feet. The 520 south from crosscut east has been driven 12 feet 6 inches, total distance 26 feet 6 inches. Lode of no assay value, and drivage suspended. The 370 crosscut east has been extended 5 feet 6 inches, total distance 32 feet. No change. Kennedy's shaft has been sunk 6 feet, total depth 30 feet below the 600 level. Crosscut west at the 600 feet level has been extended 8 feet, total distance 100 feet, and drivages north and south have been commenced on the portion of the lode referred to in my last. The 600 south has been driven on this part of the lode 11 feet 6 inches, total distance 11 feet 6 inches. Lode 2 feet wide, assaying 2 dwts. 12 grains. The 600 north has been driven on the same part of the lode 11 feet, total distance 11 feet. Lode 1 foot 6 inches wide, assaying 1 dwt. 21 grains. The drivages on the portions of the lode first met with in the crosscut at this level have all been suspended. The 520 south main level (on the west part of the lode) has been driven 15 feet, total distance 454 feet 6 inches. Lode 2 feet wide, assaying 2 dwts. 12 grains. The drivage on the eastern part of the lode at this level has been suspended. A rise has been commenced in the back of the 520 north at 513 feet from the shaft. This rise has been put up 10 feet 6 inches; lode (quartz) 1 foot wide, assaying 1 dwt. 6 grains. The 440 south has been driven 32 feet, total distance 903 feet 6 inches. Lode 3 feet wide, assaying 2 dwts. 12 grains. The 440 north rise has been put up 18 feet 6 inches, total height 46 feet. Lode 6 inches wide, assaying 5 dwts. In the stope in the back of the 440 south the lode is 2 feet wide, and assays 1 ounce 8 dwts. 18 grains, and in the stope in the back of the 440 north it is 4 feet wide, worth 2 ounces 17 dwts. 12 grains. The 370 south has been driven 20 feet, total distance 631 feet 6 inches. Lode 1 foot wide, assaying 13 dwts. 18 grains. The 370 north has been driven 13 feet 6 inches, total distance 487 feet 6 inches. Lode disordered and of no value. The 370 north rise has been put up 12 feet, total height 33 feet 6 inches. Lode 9 inches wide, assaying 7 dwts. 12 grains. The lode in the stope in the bottom of this level is 8 feet wide, and assays 2 ounces 15 dwts., and in the stope in the back of the level is 10 feet wide, worth 1 ounce 18 dwts. 18 grains. Crosscut west at the 370 north has been extended 13 feet 6 inches, total distance 322 feet 6 inches. A branch of quartz of no assay value has recently been met with. The 300 south has been driven 26 feet; total distance, 506 feet. Lode 2 feet 6 inches wide, assaying 5 dwts. In the stope in the back of this level the lode is 1 foot wide, and assays 2 ounces 5 dwts. In the stope in the back of the 160 north the lode is 6 feet wide, and assays 7 dwts. 12 grains. North shaft has been sunk 3 feet; total depth 33 feet 6 inches below the 520 feet level. Lode 1 foot wide, assaying 3 dwts. 18 grains,—Old mill samples. Pulp. 1 ounce 8 dwts. 3 grains. Old mill samples. Tailings, 4 dwts, 6 grains.—New mill samples. Pulp, 1 ounce 8 dwts. 18 grains. New mill samples. Tailings, 4 dwts. 18 grains.

NINE REEFS.—Fortnightly report of Captain Woolcock, mine agent, dated May 1:—Vyvyan's Shaft 220 feet, In the stope working in the bottom of this level to the south of shaft the lode continues about the same as last reported—viz., from 2½ to 3 feet wide. The quartz leader has widened, and is now from 6 inches to 1 foot, and this by assay is worth 2 ounces 15 dwts. 6 grains of gold per ton. Ground stoped for last month 5 fathoms 4 feet 1 inch. We are working two stopes in the back of this level, in which the quartz varies from 6 to 10 inches wide, and an average example taken throughout the fortnight gave by assay 2 ounces 5 dwts. 4 grains of gold per ton. The ground is hard for overhand stoping, and the progress is slow. Ground stoped in April 2 fathoms 5 feet 7 inches.—145 feet level. In the two stopes working in the back of this level to the south of shaft the lode is from 2½ to 3 feet wide, carrying quartz varying in width from 8 inches to 1 foot, and worth by assay 1 ounce 10 dwts. 6 grains of gold per ton. The ground stoped 12 fathoms 5 feet 6 inches.—South shaft. This shaft has been sunk 5 feet 2 inches, and is now 10 feet 2 inches below the 210 feet level. For the first four days the sinking was stopped owing to having cut an increased quantity of water in the crosscut, which overpowered the small donkey pump. We had then to prepare a place and fix a more powerful pump, since which the water has been kept with great ease, and I do not anticipate any further trouble, and hope to make much better progress in future. I regret to say the lode continues of a disordered character, composed of schist, with veins of quartz running through it; these are auriferous, but the yield for gold at present is not of sufficient value to report. The 210 feet level north has been driven 5 feet 5 inches, total from shaft 56 feet 9 inches. The lode at present is rather pinched and dry, but as we gain north I think it will open out and get more porous, when we may expect to see a better lode. An average sample broken from the end throughout the fortnight gave by assay 5 dwts. 10 grains of gold per ton. The 210 feet level south has been driven 8 feet 8 inches, total from shaft 41 feet 7 inches. The footwall part of the lode is soft, and letting out more water, but as yet I am unable to report an improvement in its value, being worth by assay 4 dwts. 8 grains of gold per ton. The crosscut west has been further extended 11 feet 1 inch, making 37 feet from the level. The ground through which we are passing is of a congenial character, and letting out water freely, which may be considered a good indication, and I hope something good will soon manifest itself.—McTaggart's lode, No. 1 shaft. This shaft has been sunk 7 feet 2 inches, making a total depth from surface of 124 feet 8 inches. The lode is 15 inches wide, very similar in character as last reported, being composed of a soft schist, with a little quartz intermixed, and by assay worth for gold 2 dwts. per ton. The 100 feet level north has been driven 10 feet 10 inches, total distance from shaft 106 feet 5 inches. On the 18th ult. we intersected a dyke running at about right angles to the lode, and the drivage in the past fortnight has been through this. I am unable to say the width of the dyke, as there is nothing defined at surface; and, judging from indications, I am of opinion that the lode will be found in a disturbed state to the north of it.—Surface. The machinery, &c., throughout the mine is in good order, and working satisfactorily. There is nothing in the ordinary work that calls for comment.—Mill. We are cleaning up to-day, and the result will be cabled in due course. I am unable to say what our return will be, but, judging from appearances, our output will, I trust, be very satisfactory.

MYSORE.—May 1, 1895: Mining operations for the fortnight ending April 29, 1895: Rowse's shaft, 1460 feet level north of crosscut west. This level has been driven 16 feet, making a total distance driven of 162 feet; there are a few small stringers of quartz which assay 1 ozs. 2 dwts. 4 grs.—1460 feet level north of winze. This end has been driven 12 feet, making a total distance driven of 211 feet; the lode is 4 feet wide, assaying 13 dwts. 1 gr.—1460 feet level south of winze. Driving south from the winze in the bottom of this level. Driven 17 feet, making a total distance driven of 25 feet; the lode is 4 feet wide, assaying 3 dwts. 6 grs. The rise against Ribblesdale's shaft in the back of the 1460 feet level south of sump winze has been put up 13 feet, making a total height of 22 feet; the lode is 3 feet wide, assaying 1 dwt. 7 grs.—1360 feet level south of crosscut. This end has been driven 17 feet making a total distance driven of 281 feet 4 inches. The lode is 1 foot wide, assaying 1 oz. 12 dwts. 16 grs. There are 2 stopes in the back of this level, the average width of the lode being 3 feet, giving an average assay of 2 dwts. 14 grs.—1360 feet level North of Crosscut. There are 2 stopes in this level, the average width of the lode being 3 feet, giving an average assay of 2 dwts. 14 grs.—1360 feet level South of Sump Winze. We have resumed the driving of this level. Driven 9 feet, making a total distance driven of 19 feet. The lode is 3 feet wide, assaying 14 dwts.—1260 feet level North. We have also resumed the driving of this level. Driven 12 feet, making a total distance driven of 714 feet. The lode is 6 inches wide, assaying 6 dwts. 12 grs. There are 4 stopes in the back of this level, the average width of the lode being 5 feet, giving an average assay of 10 dwts.—1 gr.—1260 feet level south. There are three stopes in the back of this level, the average width of the lode being 4 feet, giving an average assay of 1 oz.4 dwts. 5 grs.—1160 feet level north. There are 4 stopes in this level, the average width of the lode being 2 feet 6 in., giving an average assay of 15 dwts. 15 grs.—1160 feet level south. This level has been driven 2 feet 4 inches, making a total distance driven of 423 feet 6 inches, the lode is 1 foot wide assaying 10 dwts. 10 grs. There are 2 stopes in this level, the average width of the lode being 1 foot 3 inches, giving an average assay of 1 oz. 7 dwts. 12 grs.—North of the crosscut east. This has been driven 17 feet, making a total distance driven of 52 feet, the lode is 2 feet 6 inches wide, assaying 19 dwts. 14 grs.—South of the Cross-cut East. This has been driven 2 feet, making a total distance driven of 6 feet, the lode is 2 feet wide, assaying 1 oz. 19 dwts. 14 grs.—1060 feet level N.E. This level has been driven 21 feet, making a total distance driven of 691 feet.—990 feet level North. The lode in the stope in the back of this level is 1 foot wide, assaying 6 dwts. 12 grs.—890 feet level North. The lode in the stope in the back of this level is 2 feet wide, assaying 1 ounce.—890 feet level North of Crosscut. This level has been driven 21 feet 6 inches, making a total distance driven of 292 feet; the lode is 2 feet wide, assaying 14 dwts. 8 grs.—

The rise in the back of this level has been put up 3 feet 6 inches, making a total height of 66 feet and holed to the 780 winze. The lode in the stope in the back of this level is 3 feet wide, assaying 19 dwts. 14 grs.—890 feet level south. This level has been driven 15 feet, making a total distance driven of 296 feet.—780 feet level north. The lode in the stope in the back of this level is 2 feet 6 inches wide, assaying 11 dwts. 17 grs.—780 feet level north on new chute. This level has been driven 24 feet, making a total distance driven of 430 feet, the lode is 2 feet wide assaying 1 oz. 7 dwt. 10 grs. The winze in the bottom of this level has been sunk 6 feet making a total depth of 18 feet, and holed to the 890 rise. There are four stopes in the back of this level, the average width of the lode being 3 feet, giving an average assay of 1 oz. 7 dwts. 18 grs.—620 feet level north of crosscut. There are 6 stopes in this level, the average width of the lode being 2 feet, giving an average assay of 4 dwts. 16 grs.—620 feet level south of crosscut. The lode in the stope in the back of this level is 2 feet 6 inches wide, assaying 18 dwts. 6 grs.—Driving south on the branch in the 620 crosscut east. This end has been driven 14 feet, making a total distance driven of 35 feet 6 inches; the lode is 3 feet wide, mixed, assaying 4 dwts. 13 grs.—Crocker's shaft. This shaft has been sunk 24 feet 6 inches, making a total depth of 183 feet below the 620 feet level.—466 feet level north. The lode in the stope in the back of this level is 4 feet wide, assaying 4 dwts. 13 grs.—400 feet level north. There are two stopes in the back of this level, the average width of the lode being 3 feet, giving an average assay of 16 dwts. 7 grs.—296 feet level North. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 1 oz. 2 dwts. 4 grs.—236 feet level North. There are 3 stopes in the back of this level, the average width of the lode being 1 foot 8 inches, giving an average assay of 13 dwts. 11 grs.—Taylor's Shaft, 466 feet level North. The lode in the stope in the back of this level is 2 feet wide, assaying 3 dwts. 6 grs. —Gilbert's Shaft, 520 feet level North. There are 2 stopes in the back of this level, the average width of the lode being 1 foot 10 inches, giving an average assay of 11 dwts. 9 grs.—520 feet level South. The lode in the stope in the back of this level is 2 feet wide, assaying 1 ounce. —430 feet level North. There are 2 stopes in this level, the average width of the lode being 2 feet, giving an average assay of 1 oz. 4 dwts.—360 feet level North. The lode in the stope in the bottom of this level is 1 foot 8 inches wide, assaying 3 dwt. 22 grs.—290 feet level north. There are 2 stopes in this level, the average width of the lode being 1 foot 11 inches, giving an average assay of 17 dwts. 9 grs.—290 feet level south. The lode in the stope in the bottom of this level is 2 feet wide, assaying 7 dwts. 19 grs.—180 feet level south—There are 2 stopes in the back of this level, the average width of the lode being 3 feet, giving an average assay of 16 dwts. 23 grs.—Tennant's shaft. Crosscut west at the 750 This has been driven 24 feet, making a total distance driven of 89 feet. 520 feet level north—There are 2 stopes in the bottom of this level, the average width of the lode being 1 foot 6 inches, giving an average assay of 9 dwts. 2 grs. Schaw's Shaft.—450 feet level north of crosscut There are three stopes in this level, the average width of the lode being 1 foot 5 inches, giving an average assay of 16 dwts. 7 grs.—450 feet level South of Crosscut. This level has been driven 2 feet 3 inches, making a total distance driven of 325 feet 3 inches, the lode is 3 inches wide, no essay made. The winze in the bottom of this level has been sunk 11 feet, making a total depth of 51 feet 9 inches, the lode is 2 feet wide, assaying 13 dwts. 1 gr. There are three stopes in the back of this level, the average width of the lode being 2 feet 5 inches, giving an average assay of 6 dwts. 4 grs.—McTaggart's Shaft. This shaft has been sunk 2 feet 6 inches, making a total depth of 63 feet 3 inches below the 550.—550 feet level north. This level has been driven 12 feet 6 inches, making a total distance driven of 94 feet 2 inches.—550 feet level south of crosscut west. This end has been driven 13 feet 9 inches, making a total distance driven of 62 feet 6 inches.—320 feet level south. There are 3 stopes in the back of this level, the average width of the lode being 2 feet 1 inch, giving an average assay assay of 5 dwts. 5 grs.—Glen shaft, 250 ft. level north, No. 1 crosscut east. This has been driven 2 ft. 9 in., making a total distance driven of 20 ft. 9 ins.—No. 2 crosscut east. This has been driven 3 ft. 6 ins., making a total distance driven of 365 ft. 6 ins.; we have for the present suspended the driving of this crosscut.—Ribblesdale's shaft. The men are now engaged stripping down the rise and timbering.—William's shaft. Crosscut east from the 173. This has been driven 3 ft. 2 ins., making a total distance driven of 122 ft. 8 ins.—Health. Good.

AFRICAN ALLUVIAL.—Extract from letter from the superintending engineer, Mr. W. M. Niness, dated March 29: We have been pegged out on every side by old alluvial diggers, which speaks for itself in reference to the value of our ground. A cablegram from Mr. Niness states:—"Alluvials water ditch good progress is being made. Entire length required 12,000 feet, of which 3900 feet already completed. French company has commenced working its alluvial, excitement in the district very great. Proceeding carrying out exploration diamondiferous claims.

BRITISH BROKEN HILL PROPRIETARY.—Mining manager's report for the week ending April 3: Blackwood (No. 1) shaft. 240 feet level. Plat completed; have driven northwards a distance of 10 feet, at which point the east crosscut is started, which has been driven 8 feet through mullock carrying blotches of sulphides.—Howell (No. 2) shaft. 300 feet level. West crosscut extended 7 feet, total length 60 feet. Face in very hard mineralised country. North-east drive lengthened 15 feet, total length 163 feet. Face in clean country. East crosscut advanced 9 feet, total distance 23 feet Face in similar material to that in west crosscut.—200 feet level. Have finished timbering top portion of far north winze, and are now putting in a shoot in bottom of same on 300 feet level. The work of dividing off this winze will then be proceeded with.—Marsh (No. 6) shaft. 2nd level. West crosscut off south drive down winze stopes was lengthened 4 feet, total length 36 feet; at which point we encountered the wall; we then drove southwards a distance of 7 feet, but as ore is getting patchy, are stopping this, and we will drive northwards instead, in order to prove the lode in that direction. We have mined 3 tons, averaging 29 per cent. and 58 ounces, 4 tons, 33 per cent and 50 ounces, and 1 ton, 21 per cent. lead and 13 ounces silver per ton. South west drive near junction boundary driven 9 feet, total length 110 feet. Face showing about 3 feet country in bottom with low grade sulphides intermixed with sandstone and quartz in upper portion. We broke 6 tons sulphides, assaying 34 per cent. lead, 13 ounces silver, and 18 per cent. zinc. No. 2 west crosscut off north drive extended 13 feet, making total distance 31 feet, face carrying more mullock. No. 2 east crosscut driven 13 feet, total 26 feet, face in country rock. South drive off long east crosscut near north boundary driven 9 feet, total 29 feet, where it is stopped as lode pinched out. Some work was also done on lode over crosscut, but was suspended as lode proved poor. The assays for the week varied: Carbonates, 11 to 35 per cent. lead, and 8·4 to 68·6 ounces silver per ton; and sulphides, 11 to 34 per cent. lead, 2 6 to 14 ounces silver, and 6 to 24·8 per cent. zinc per ton.

BAYLEY'S REWARD No. 1 SOUTH.—Mining report, dated Coolgardie, W.A., March 25:—Main shaft. Work has been continued driving south from the main shaft at the 170 feet level which is at present 8 feet from shaft. The size of the reef I cannot say at present as we are only carrying a portion about 4 feet wide, probably; it is from 6 to 7 feet, the remainder will be taken out after we are some distance further forward. The stone in places contains streaks of pyrites, and at times fine gold is visible, but the reef is one of the hardest I have ever seen, almost as hard as steel.—90 feet level. Winze from the 90 feet level sunk for the week 6 feet, total 30 feet, stone showing gold, and should be of fair value, the ground not being drained, owing to the close nature of the reef below. I am doubtful if we shall be able to sink much further for some little time until the bottom drive gets fairly underneath.—Stope. Work has been continued in one of the stopes above the south drive, which is returning stone of similar grade to that being crushed.—Condenser. The condenser to the battery engine makes a great saving, the loss of water this week being about 696 gallons per day, instead of from 1600 to 1800 as formerly. I intend to make some further alterations this week, which we think will still further improve it.—Stone treated. Stone crushed for the week 90 tons, making 170 tons passed through the battery for the fortnight, yielding 200 ounces of gold, as advised by wire. (Signed) W. H. Matthews.

CASSIDY HILL.—The mine manager's report, received May 13, states:—North-east drive driven 11 feet, total from No. 2 shaft 125 feet. Reef 10 inches thick, and shows good gold. Have proved this reef for 220 feet, and have at present 90 feet of backs. The general prospects of Cassidy's are brighter now than they have been for some time.—Paringa. The stone from No. 3 is very promising, looking similar to the Lake View stone. Will try some samples next week.

CHAMPION REEF.—Fortnightly report of Captain James Rowe, superintendent, dated April 22: Garland's shaft. This has been sunk 17 feet, total depth 905 feet 9 inches. Lode 2 feet wide, assaying 1 ounce 17 dwts. 12 grains of gold per ton. The 840 feet level north of shaft has been driven 27 feet 3 inches, total length 259 feet. Lode 3½ feet wide, assaying 1 ounce 12 dwts. 8 grains of gold per ton. 840 feet level south driven 36 feet, total length 290 feet. Lode 3½ feet wide, assaying 1 ounce 15 dwts. 6 grains of gold per ton. No. 1 rise in back of level risen 20 feet 9 inches, total height 36 feet. Lode 5½ feet wide, assaying 1 ounce 5 dwts. 12 grains of gold per ton. No. 2 new rise in back of level, 120 feet south of No. 1, risen 6 feet 3 inches. Lode 1½ foot wide, assaying 1 ounce 11 dwts. 6 grains of gold per ton. The 740 feet level north has been driven 26 feet 6 inches, total length 486 feet 6 inches. Lode 2 feet wide, assaying 2 ounces 2 dwts. 10 grains of gold per ton. No. 2 rise in back of level risen 12 feet 6 inches, total height 69 feet. This is communicated with 630 north. No. 3 rise in back of level risen 18 feet 9 inches, total height 29 feet. Lode 1½ foot wide, assaying 1 ounce 10 dwts. of gold per ton. The 740 south driven 7 feet 3 inches, total length 378 feet 6 inches. This having met with the dyke is suspended. New winze below level (120 feet from shaft) sunk 8 feet 9 inches. Lode 3 feet wide, assaying 1 ounce 4 dwts. 4 grains of gold per ton. The 630 feet level north has been driven 27 feet, total length 586 feet 9 inches. An improvement has taken place in this end, and the lode being now 2½ feet wide, assaying 18 dwts. 6 grains of gold per ton. No. 5 (new) rise in back of level (212 feet north of No. 4) risen 4 feet 3 inches. The lode is 2 feet wide, and assaying 1 ounce 8 dwts. 2 grains of gold per ton. No. 4 winze below 530 north sunk 10 feet 6 inches, total depth 32 feet 6 inches. Lode 1½ feet wide, assaying 1 ounce 18 dwts. 7 grains of gold per ton. No. 9 rise in back of level risen 6 feet, total height, 34 feet 6 inches. This is communicated with winze sunk below 340 south of Ribblesdale's shaft.—Ribblesdale's shaft. This has been sunk 7 feet, total depth 597 feet 6 inches. Lode improved, is now 6 inches wide, assaying 1 ounce of gold per ton. The 540 feet level north on west part of fold has been driven 28 feet 9 inches, total length 501 feet 6 inches. Lode 2 feet wide, assaying 1 ounce 15 dwts. of gold per ton. The 540 north of east crosscut on middle part of fold driven 19 feet, total length 42 feet 6 inches. Lode 6 feet wide, assaying 1 ounce 13 dwts. 12 grains of gold per ton. Rise in back of 540 north on west part of fold to communicate with Carmichael's shaft risen 13 feet 3 inches, total height 25 feet 6 inches. Lode 3 feet wide, assaying 2 ounces 2 dwts. 10 grains of gold per ton. The 540 feet level south of crosscut east of 540 south of shaft driven 13 feet 3 inches, total length 101 feet 3 inches. Lode 1½ foot wide, assaying 1 ounce 11 dwts. 8 grains of gold per ton. Incline rise south of east crosscut at 440 south of shaft risen 17 feet 6 inches, total height 182 feet 3 inches. Lode 4 feet wide, assaying 1 ounce 6 dwts. of gold per ton. Incline winze north of crosscut sunk 9 feet 6 inches, total depth 215 feet. This is communicated with 540 south of crosscut east of 540 south of shaft. The 440 feet level south of No. 1 crosscut west of 440 south on middle part of lode driven 3 feet. Lode 3½ feet wide, assaying 15 dwts. 4 grains of gold per ton. Incline winze north of crosscut sunk 17 feet 9 inches total depth 38 feet 6 inches. Lode 4 feet wide, assaying 2 ounces 14 dwts. of gold per ton. Incline winze north of east crosscut at 340 south of shaft sunk 12 feet 9 inches, total depth 221 feet 3 inches. This is communicated with 440 north of No. 1 crosscut west of 440 south of shaft. No. 2 winze below level sunk 1 foot 6 inches. Total depth 70 feet 6 inches. This is communicated with No. 9 rise in back of 530 north of Garland's shaft. 340 south of east crosscut driven 8 feet, total length 8 feet. Lode 1½ foot wide, assaying 1 ounce 15 dwts. 6 grains of gold per ton.—Carmichael's shaft. This has been sunk feet, total depth below the 440 feet level 47 feet. Lode 2½ feet wide, assaying 2 ounces 12 dwts. 4 grains of gold per ton. The 315 crosscut west of shaft driven 15 feet, total length 728 feet. There is no change in the strata as yet, which is hard and spare for driving.—Rowe's shaft. This has been sunk 8 feet 6 inches, total depth below the 415 feet level 75 feet 6 inches. Lode 2 feet wide, assaying 3 ounces 2 dwts. 8 grains of gold per ton. Rise in back of 415 north of shaft risen 7 feet 6 inches, total height 40 feet 6 inches. Lode 2 feet wide, assaying 2 ounces 16 grains of gold per ton. Winze below 415 south of shaft sunk 10 feet, total depth 95feet. Lode 3½ feet wide, assaying 2 ounces 2 dwts. 10 grains of gold. This being deep enough for the 515 feet level we have suspended the sinking, and have commenced driving north of winze to communicate with shaft.—Stopes. These are yielding their usual quantities of quartz. The value and size of lode in same will be given in next report.—Machinery. The whole of this throughout the mine is in good working order.—Addition to mills. This work is being pushed ahead, and satisfactory progress is being made in erecting same.

CRAVEN'S CALEDONIA.—The following fortnightly report has been received from the mines, dated Charters Tower, March 14:—The No 11 level has been extended a further 17 feet making a total of 63 feet, from the slide. The reef is about 10 inches thick in the face of this drive at present. In the first three stopes over this level the reef is pinched a little but in the others the reef is about 8 inches thick and seems to be improving in quality. In the underhand stope from No 9 level the reef is about 10 inches thick of very good quality. In the three stopes over No 9 level the reef is about 8 inches thick. The drive on the fault in No 8 level has been extended a further 14 feet making a total of 182 feet from starting point, and I now expect to get the reef at any time in this crosscut. The total amount of quartz hauled through the two shafts for the fortnight is 48 tons, making a total of 158 tons towards the present crushing. The following is an extract from a letter. This crushing has not been previously advised by cable:—Crushing—A crushing of 226 tons was cleaned up this week for a yield of 24 ounces 8 dwts of gold, which was only sufficient to pay the expenses and wages. You will see by the half-yearly reports and balance-sheets, copies of which will be sent to you for distribution as soon as they are printed. The meeting has been held and the reports and balance-sheets will be printed as soon as possible.

FERREIRA.—From the report for the quarter ending March 30. Profit for quarter, £43,037 4s. 10d.—Capital expenditure. Machinery and plant, £8234 11s. 5d.; buildings, £1022 1s. 9d.; permanent works, £3035 9s. 2d.; total, £12,292 2s. 4d. Mining expenses, 19s. 5·92d. per ton; transport expenses, 5·56d. per ton; reduction expenses, 5s. 11·36d. per ton; total, 25s. 10·84d. No. 1 main shaft sunk 92 feet; total depth, 1089 feet. No. 2 main shaft sunk 53 feet; total depth, 1077 feet. The 320 feet level has been extended in south reef 8 feet. The 820 feet level has been extended in south reef 420 feet. The average width of reef is 2 feet 10·66 inches, and its average assay value is 4 ounces 4·45 dwts. of gold to the ton. The 920 feet level has been driven in south reef 332 feet. The average width is 1 foot 0·61 inches, and the average assay value is 3 ounces 11·78 dwts. per ton. The 420 feet level has been extended in main reef leader 117 feet. The average width is 1 foot 2·29 inches, and average assay value 1 ounce 0·44 dwts. The 520 feet level has been extended in main reef leader 118½ feet. The average width is 1 foot 7·28 inches, and the average assay value 1 ounce 18·84 dwts. The 620 feet level has been driven in main reef leader 324½ feet. The average width is 1 foot 4·11 inches, and the average assay value 1 ounce 18·17 dwts. The 120 feet level has been driven in the main reef leader 64 feet. The 920 feet level has been driven in the main reef leader 45 feet. The assays for the two last-named levels are not yet completed. Four winzes are being sunk in the south reef, and one in the main reef leader. Rock cut during the quarter, 2764 feet.

PAHANG CORPORATION.—Sungei Lembing, April 8: I beg to submit to you progress report of mining operations for the month of March:—Pollock's. No. 1 below adit. The winze A was sunk a further 29 feet, making the total depth 96 feet. The back of No. 2 drive was intersected at this point. The ore from here was of poor quality for the whole of the month. I mentioned in my report for October, 1894, that we found the lode in this winze underlaying at a much flatter angle than it had done over the back of the level. I now find that the tin-bearing ore for over 40 feet of the lower part of the mine has gone down at a somewhat steeper grade than the hanging wall we followed down to No. 2 drive. Consequently, the payable ore is a little south or under the footwall of the winze. As we are not able to haul an increase of stuff through the vertical shaft till such time as the new winding engine gets to work, I have started an intermediate drive to go west at a depth of about 45 feet down from the top of winze. A stope will also be carried along after the drive. We are getting good payable ore from this intermediate drive. As soon as the new engine gets to work, the stuff will be sent down the winze and through the vertical shaft to the surface. Winze B was sunk a further 13 feet, making the total depth 43 feet. At this point the lode formation is about 12 feet wide, and carrying about 6 feet in width of good payable ore. As the water is rather heavy for sinking, I intend to stop that work for a time until the No. 2 drive is advanced some distance further, when it may take away some of the water. This winze is 177 feet west of winze A. I also intend driving intermediate drives east and west from the present bottom of winze.—No. 2 below adit. The drive westward was advanced a further 48 feet, making the total from crosscourse 79 feet. At a point 47 feet west of crosscourse, lode formation was met with, from which we got a heavy flow of water, which caused work to be suspended in the No. 3 level, as the pump was not able to keep the water down. We were not able to haul any stuff from No. 2 level for about nine days, then the flow of water abated a little. We are now enabled to haul small quantities from No. 2 at intervals. Work was resumed in No. 3 the latter part of the month, but we are still unable to haul any stuff from No. 3. Where the lode formation was cut in No. 2 we met with a little tinstone. The formation carrying the little tin was bearing about 4° north of west, which is about the course of the tin-bearing ground in No. 1 level. The formation mentioned above has got a well-defined hanging-wall bearing north-west by south-east, which we followed to a point 77 feet west of crosscourse where the winze A was met with. The present end of drive is now about 5 feet west of the winze, and I have altered the course of drive to a little south of west so as to intersect the tin-bearing formation mentioned above, which I expect to do in a few days' driving. The lode formation going north-west is carrying copper, arsenic, and other minerals, but no tin so far.—3 below adit. Owing to the cause mentioned above, progress here was very much retarded during the month. The country met with in this drive is extremely hard. A further distance of 17 feet was driven, making a total west of crosscut 120 feet. As this drive is now approaching a point vertically under the winze A No. 1 level, and the lode formation we have been following is now bearing more to the northward. I have altered the course of the drive more westerly, and from indications we are at present meeting with, I hope soon to get into tin ground.—Jeram Batang. The drive going east in the adit level was further advanced a distance of 44 feet, total length from crosscut 177 feet. Ore of good quality has been coming to hand the whole of the month. The size of lode may be 6 or 9 feet wide. There is only one wall in sight at present. The adit was advanced a further 37 feet, total from crosscut 102 west. The lode here is 3 feet wide, and showing a little tin at intervals. The No. 1 above adit east was further advanced 36 feet, total from crosscut 165 feet. Good ore has also been coming to hand from here from a good size lode. The winze B in No. 1 west drive was started early in the month, and was sunk to a depth of 22 feet. The lode is about 4 feet wide, and carrying a little tin.—No. 2 above adit. From the bottom of winze B in the west drive, a small drive had to be put in north about 6 feet to intersect the west drive at No. 1 above adit, the winze being sunk in the footwall of lode.—Wm. Straughan.

WENTWORTH EXTENSION.—Report dated April 6.—Carroll shaft No. 1 west crosscut in 19 feet. Progress for the week, 9 feet; face in hard diorite; expected to cut in a few feet further a large quartz vein. East crosscut extended 19 feet, total length 35 feet; face in diorite, showing the serpentine in the joints.

D'ARCY ESTATES.—Report dated April 6:—Main shaft sunk and timbered 6 feet, total depth 345 feet; no change. Portion 84. Drive from main shaft advanced 12 feet, total length 84 feet. Prospecting shaft No. 3 sunk to a depth of 50 feet. Portion 44. Shallow shafts and trenches were continued, showing prospects of fine gold.

HARMONY GOLD AND LAND.—Under date the 10th ult., Mr. Procter writes:—Laysdorp. Yesterday I had a telegram from Mr. Evans at Cape Town, so I suppose within eight days or so he will reach Pietersburg. I am very glad he is here, as from what I learn there is soon going to be a considerable movement at that place, and I am being inundated with all kinds of applications. Owing to the unprecedented heavy rains this year, the grass is still green, and can only be burnt late. Had this not happened, there would have been a great rush to this region.

HANNAN'S REWARD.—The following is Mr. Edwardes' (a director) report upon the property:—Having just returned from West Australia, I now beg to report that agreeably to your request I made an examination of the company's property, which I reached on the 20th of February. The property, as you are aware, consists of 27 acres, including the Reward Claim, awarded to Hannan by the Government for his discovery of this gold field, now so famous for its many rich mines. It is practically a hill some 62 feet in altitude (1500 feet above sea level); when Hannan secured it, there was an alluvial deposit varying in thickness from 6 inches to about 3 feet, which yielded a golden harvest before this company acquired it. There is still gold left in this deposit, which we should soon be able to account. Underlying this deposit there is another one called cement, of which it is estimated there are many thousands of tons which should prove very remunerative. The geological formation is schist and diorite, the schist represents original crystallised eruptive masses, which have been subjected to enormous pressure. The veins (or reefs) are segregated veins like most of the Californian auriferous veins. Phillips, the great authority on ore formation, says:—"It therefore becomes a question whether segregated deposits and fissure veins have not often a common origin, and whether in thus naming them differently we are not sometimes making a distinction where no difference beyond the parallelism or non-parallelism of the deposit with the enclosing strata exists." The many veins on the company's property varying in thickness from 2 inches to 2 feet, and ranging from 1½ ounces to 12 ounces to the ton, average about 5½ ounces. With depth these veins appear to become stronger and richer, and is believed they will make into large reefs lower down. Mr. Goetzler (Geologist to the Government of Western Australia) states: "The gold deposits here are a network of lodes and veins, striking in different directions. A great number of leases are worked in this locality by parties and syndicates, and judging from already exposed ore deposits, Kalgoorli (Hannan's) will become one of the richest gold mining centres in the central gold fields of Western Australia." With respect to the question of water, I am happy to be able to say that Mr. Corbould is of opinion that this will be reached in the course of about two months. Mr. Goetzler says: "Salt water is abundant on the fields and can be obtained from the numerous lakes, mine shafts, and from the shafts sunk for the special purpose of obtaining it. Instances will occur where it will become advisable to resort to distillation and condensation." The machinery and plant for the treatment of ore has not been ordered, as Mr Corbould considers it will be time enough, to do this when water has been obtained. The prospects of the company are excellent, and I have every confidence in expressing the belief that the shareholders will very shortly be amply satisfied with their investment. In conclusions it affords me the greatest possible pleasure in congratulating both the board and the shareholders on their good fortune in possessing such a manager as Mr. Corbould, who is not only a most efficient and energetic mine manager, but an experienced engineer and assayer, who has at heart the best interests of the company. I append an account of the work done up to March 6. — Faithfully yours, T. Edwardes. — Hannan's, March 6, T. Edwardes, Esq. Dear Sir,—The following is a statement of work done on the Hannan's Reward Mine to date, from the time the property was first opened up:—Shafts sunk. Wynne shaft. 10 by 4 in the clear, 90 feet; Barnfield shaft, 7 by 4 in the clear, 77 feet 2½ inches; Brownsword shaft, 7 by 4 in the clear, 58 feet 6 inches; Hannan's shaft, 7 by 4 in the clear, 50 feet; Prospectors shaft, 66 inches; Edwardes shaft, 7 by 4 in the clear, 69 feet 2½ feet; Trouncer shaft, 7 by 4 in the clear, 61 feet 7½ inches. N.B.—All these shafts have been sunk to a level of the 86 feet level. Crosscuts. 86 feet level, connecting Wynne and Hannan's shaft, 495 feet; Barnfield shaft crosscut, extended north to connect Wynne shaft, 37 feet; No. 5 reef south crosscut, 14 feet 6 inches; Edwardes shaft crosscut south, 136 feet; Trouncer shaft (Chairman's) crosscut, north, 102 feet.—Drives. No. 2 reef, east drive, 94 feet 6 inches; No. 2 reef west drive, 62 feet; No. 5 reef, east drive, 13 feet; No. 5 reef, west drive, 146 feet 6 inches; No. 6 reef, east drive, 120 feet; No. 6 reef, west drive, 54 feet.—Winzes. No. 5 reef east, sunk, 15 feet; No. 6 reef west, sunk 27 feet 6 inches.—Plot. Wynne shaft 86 feet level, chambers 10 feet by 7 feet on north, and 10 feet by 7 feet on south cut, No. 5 winze chamber cut 10 feet by 7 feet.—Sundry underground works. Wynne shaft has been timbered up, and cage runners and footway fixed, 86 feet level plot has been timbered and flat sheets laid. Tramlines have been laid in 86 feet level crosscut and is now ready for trucking, and flat sheets have been laid. Shaft footways have been fixed in all shafts, and windlasses made for each, as well as the winzes placed in position. Winze chamber (No. 5 reef) has been timbered and winze also.—Surface work. Galvanised iron carpenter's shop, 12 by 17 by 13 has been erected, and carpenter's bench, tool racks &c. Galvanised iron blacksmith's shop, 12 by 17 by 13, with forge, chimney and other fixtures has been completed. Galvanised iron store-room, 12 by 14 by 12, with fixtures and fittings has also been built. Poppet heads have been erected, and cage way placed in position. Engine bed has been laid down and bed logs fixed. Ore paddock has been made, and floored and wired in. Timber rack has been made. Barrows, blacksmith's tools, grindstone, mounting, &c., have all been made on the mine. A roadway has been cut for convenience of cartage, to allow of easy approach to all the shafts, to do which all the alluvial workings had to be filled in and levelled and scrub cut back.—General remarks. The mine at present is well stocked with tools, &c, and shaft, timber, and sawn timber delivered and stocked (about 4000 poles of the former and 3500 feet of the latter) ready for any future emergency. The buildings put up have been constructed of rough timber and iron, and made strong and durable, with plenty of ventilation provided for by a space being left nearest the roofs on each side of the walls 2 feet in the blacksmith and carpenters' shops, 1 foot in store room. The roofs are gabled, and have guttering running all round, with down pipes and tanks fixed for catching any rainfall we may get. Iron buildings soon pay for themselves in a dry country like ours by the saving one makes in water, one good rainfall resulting in us saving a catchment of about 2000 gallons or over would mean at least £30 to £40 to us, and the water would, if properly stored, carry us on over two or three months. The manager's, undergrcund manager's, and purser's residences are constructed of calico.—W. H. Corbould

BAYLEY'S REWARD CLAIM.—Ore and gold return for fortnight, ending March 16: Estimated amount of stone at grass 4895 tons, stone raised 149 tons, stone treated 254 tons, gold won 392 ounces.—Mining report, dated Coolgardie, March 25.—Sylvester shaft since last report has been sunk 5 feet, total being 390, or 110 feet from the level above. The lower portion of the shaft will now be timbered and chamber opened at the 380, leaving 10 feet for a well.—220 feet level. Winze at this level sunk 3 feet, a portion of the time being timbering, total 23 feet from brace, lode still being full length of winze, portions containing streaks of pyrites.—Gordon shaft. South stope shows little or no change, gold being seen from time to time in the stone raised.—North stope. Returning stone of similar value to that being crushed, lode from 4 to 5 feet wide.—No. 1 Intermediate shaft. Continues to yield stone of average grade, lode ranging in size from 4 to 6 feet.—Cockshott Shaft. Has been sunk 3 feet, full depth 102 feet from brace, lode still full width of shaft and showing signs of being near water level.—Air shaft. North drive driven for week 5 feet, total 70 feet from shaft, lode fully 4 feet wide, of the most favourable character.—Everard shaft. Drive from the end of the big blow advanced 4 feet, total 36, lode slightly over 4 feet wide, stone being strongly iron stained with good clean walls, present course being due west and having every appearance of continuing.—Stone treated. Stone treated for the week has been 151 tons, taken from the north, south, and intermediate stopes, also from the ore dump Gordon shaft.—Cleaning-up. Owing to various circumstances we found it impossible to clean-up on Saturday, the 23rd, as usual, and to save time and enable us to get more stone through the battery, we have decided to continue crushing until Saturday next, then clean-up for the fortnight.—Gold dispatched. As advised by telegraph there was dispatched by escort 395 ounces 16 dwts. bar gold on the 22nd inst.—(Signed) W. H. Matthews.

BRILLIANT BLOCK.—Mine manager's report for the fortnight ending March 26. Underlie shaft sunk 9 feet, total below 7 level 31 feet. Reef 4 feet, 17 to 20 dwts.—7 level west. Driven 11 feet, total length 90 feet. Driving across formation to strike the footwall reef. Reef over drive stopes 18 inches of (say) 15 to 17 dwts.—7 drive east. Driven 26 feet, total length 100 feet. Reef in stopes varies from 1 foot to 3½ feet, and from 15 to 20 dwts. quality.—6 drive west. Driven 10 feet, total length 301 feet. Reef in face 2½ feet, 8 to 10 dwts. In two stopes, the reef is 4 feet, 8 to 12 dwts.—6 drive east. Driven 16 feet, total length 324 feet. Reef in face 4 feet, 15 to 18 dwts. In stopes reef is from 1 to 4 feet, 17 to 20 dwts.—5 drive west. Winze 71 feet deep. Reef in bottom 2½ feet, ½ ounce.—5 drive east. No. 2 winze 80 feet deep. Reef size of winze, 17 dwts. Reef in four stopes over varies 6 inches to 3 feet, 20 to 30 dwts. The flat reef is being worked, size 6 inches to 2 feet, 15 to 20 dwts.—4 drive west. Reef 2 feet, 14 to 16 dwts.—4 drive east. Reef 1 foot, 1 ounce stone.

CARRINGTON.—Mr. Alan B. Bright, the manager of the Carrington, writes under date March 30: We shall begin sinking shaft a further distance of 50 feet in about a fortnight's time. The Victoria crosscut has intersected the footwall lode on the Carrington side of their underlie shaft. This crosscut is in about 30 feet, and the reef is about 18 inches wide of good quality ore. Mr. Bright's cablegram, since received, states that this has developed into a strong, well-defined vein, making for the Carrington shaft.

COROMANDEL.—Superintendent's report for fortnight ending April 20: Prospect shaft, 500 feet level south. A crosscut east from this end was started at the beginning of the month; 50 feet has since been driven, and we have intersected a lode 1 foot 6 inches wide, of solid quartz, which assays 3 dwts. of gold per ton, but it is unpromising in appearance, and without underlie. We are continuing the crosscut with the hope of finding something better beyond.—500 feet level north. The north end on new shoot is now 50 feet from crosscut, and the lode is pinched to a few inches in width, which indicates that we are approaching the slide seen in the level above. Drivage for the fortnight, 30 feet; assay 12 dwts. 12 grains. The end south of crosscut on this lode has also been driven 30 feet, total 42 feet, and the lode in end is 1 foot 6 inches wide, worth by assay 5 ounces of gold per ton. Rise back 440 west of dyke risen by hand-labour 4 feet, total 90 feet. Lode still improving, being 2 feet 6 inches wide, and worth 8 dwts. of gold per ton.—No. 2 rise back 440 feet on new shoot. The 320 feet end north from top has been driven 17 feet 6 inches, total 30 feet, and suspended. This machine has also driven 12 feet 6 inches south at same level. Lode in north end 3 feet wide; south end, 2 feet 6 inches wide, average assay value 7 dwts. per ton. During the coming fortnight rising will be resumed. No. 3 rise back 440 feet on new shoot risen 20 feet. Rise has been turned, and is now going up on the fold. Lode 7 feet wide, of solid quartz throughout, assaying 2 dwts. 12 grains of gold per ton.—200 feet level north east. End still in dyke, and hard for driving; progress, 27 feet, total 212 feet from shaft. 200 feet level north on lode driven by hand-labour 4 feet, total from main drift 9 feet. Lode 9 inches wide, assaying 3 ounces 5 dwts. of gold per ton.

EAST RAND PROPRIETARY.—The Anglo-French Exploration Company (Limited) as London agents for the East Rand Proprietary Mines (Limited) have received the following information from the head office in Johannesburg with regard to the operations, up to March 31 last, of the subsidiary companies in which the East Rand Proprietary Mines (Limited) have a predominating interest.—St. Angelo Company. This block will shortly be merged into a new company, to be called the Angelo Gold Mines (Limited), which acquires the 33 claims belonging to this company, together with 81½ claims from the East Rand Proprietary Mines (Limited) and the Driefontein Companies, forming a square block of 114½ claims, estimated to contain 2,320,000 tons of ore, or a life of 40 years with 40 stamps. Permanent main incline shafts have been started in both the north reef (main reef) and Ginsberg reef (south reef) and the utmost dispatch will be used in sinking same to intersect the reefs, when development on an extensive scale can be carried on. In the meantime driving is being pursued in both the east and west drifts of the present shaft with highly satisfactory results, the general manager reporting on March 30 that 225 feet have been driven, width of reef 2 feet 3 inches, average assay 1 ounce 17 dwts. per ton. Ramsay Block. The total number of feet driven is 154 feet; the reef is 5 feet wide; the footwall leader 9 inches wide, showing 8 to 10 dwts. in the end.—New Comet Company. 20 extra stamps have been ordered to be erected in the new mill, which will consist of 60 stamps, each of 1050 lbs. Crushing will commence about the beginning of June, the general manager estimating that there are fully 80,000 tons developed, of an assay value of 17 dwts.—Phœnix shaft. The total depth is now 118 feet, close timbering being still necessary; but, as there is every indication that the sides of the shaft are becoming firmer, more rapid progress will shortly be made.

GOLD FIELDS OF MYSORE.—Mine report for fortnight ending April 22: Oriental lode, South shaft. At the 170 feet level south we are raising the roof of the level to make room for rock-drills. The 380 feet level north has been driven 20 feet 1 inch, total length 296 feet 1 inch. Lode disordered, and letting out a small stream of water. The 380 feet level south has been driven 15 feet 6 inches, total length 321 feet 11 inches. Lode 3½ feet wide, assaying 15 dwts. 10 grains of gold per ton. The 280 crosscut east of shaft has been driven 15 feet 8 inches, total length 330 feet 5 inches. The strata is without much alteration since last report.—Middle shaft. We have completed the retimbering of this shaft which is now in good order. We hope soon to start the sinking.—Skip road. We are removing the ladder road in this shaft previous to our commencing to fix skiproad. The fixing of the road will soon be commenced.—Mill. I am pleased to state that this started to-day, and is working satisfactorily.

— Report on prospecting operations for fortnight ending April 22: West Balaghat block, No. 1 shaft. The 117 feet level north has been driven 3 feet 3 inches, total length 170 feet 3 inches. Lode 1 foot 6 inches wide, assaying 12 dwts. 3 grains of gold per ton. 117 feet level south driven 4 feet 9 inches, total length 145 feet 6 inches. Lode 3 feet wide, assaying 7 dwts. per ton.—No. 2 shaft. The 100 feet level north of shaft has been driven 3 feet 3 inches, total length 146 feet 5 inches. Lode 2 feet wide, assaying 13 dwts. 12 grains of gold per ton. 100 feet level south driven 4 feet, total length 161 feet 9 inches. Lode 1 foot 3 inches wide, assaying 7 dwts. 4 grains of gold per ton.—No. 3 shaft. This has been sunk 3 feet 6 inches, total depth 163 feet 9 inches. Lode 2 feet wide, assaying 8 dwts. 7 grains of gold per ton. The 117 feet level north has been driven 3 feet, total length 78 feet 9 inches. Lode 2 feet wide, assaying 12 dwts. 8 grains of gold per ton. 117 south driven 6 feet 9 inches, total length 172 feet 3 inches. Lode 1 foot 3 inches wide, assaying 7 dwts. of gold per ton.—No. 4 shaft. The 148 feet level north of shaft has been driven 2 feet, total length 67 feet Lode 1 foot 3 inches wide, assaying 5 dwts. of gold per ton. 148 south driven 3 feet 6 inches, total length 56 feet 9 inches. Lode 2 feet wide, assaying 4 dwts. of gold per ton.—Road block, North shaft. The north level from bottom of this shaft 62 feet deep has been driven 12 feet, total length 121 feet 3 inches. Lode 1 foot 3 inches wide, assaying 4 dwts. of gold per ton. South level driven 7 feet 6 inches, total length 124 feet 3 inches. Lode 9 inches wide, assaying 5 dwts. of gold per ton.

KEMPINKOTE.—Fortnightly report of Captain D. H. Williams, mine agent, dated April 22. Garland's shaft. We are making fair progress in cutting tip plat at the bottom of this shaft. 245 north drive has been driven 16 feet 9 inches, total distance from main crosscut 185 feet 9 inches. We are carrying about 6 feet of the lode upon the footwall, assaying 2 dwts. 21 grains of gold per ton of stuff. 163 feet north of main crosscut we have crosscutted in an easterly direction 13 feet 6 inches. Nothing of value met with in this. Its drivage has been suspended. 245 No. 1 crosscut west 100 feet north of main crosscut has been driven 5 feet 6 inches, total distance from footwall 32 feet 6 inches. Lode in the end full width of the drive, assaying 18 dwts. 16 grains of gold per ton of stuff. 245 south drive has been driven 21 feet 6 inches, total distance from main crosscut 156 feet. About 150 feet from main crosscut the footwall again made its appearance in this end. We are now carrying 6 feet of the lode upon the footwall, assaying 2 dwts. 21 grains of gold per ton of stuff. No. 2 winze in 183 south drive has been sunk 7 feet, total depth 58 feet. Lode in the bottom full width of the sink, assaying 4 dwts. of gold per ton of stuff. On the 19th inst. this was communicated with the 245 south drive which has greatly improved the ventilation of this part of the mine. Henry's shaft has been sunk 5 feet 4 inches, total depth from surface 289 feet 10 inches. There is no alteration in the ground in the bottom of this shaft. 258 south drive has been driven 28 feet 9 inches, total distance from main crosscut 83 feet, no change. 173 north drive has been driven 6 feet, total distance from shaft 77 feet. Lode 5 feet wide showing a trace of gold.—Prospecting. Big pit. No. 10 trial pit in south-east corner of big pit. At the bottom of this, 43 feet from surface, we have driven west 12 feet when we again intersected old workings, and sunk on it 18 feet when we met with the lode, about 2 feet wide, assaying 8 dwts. of gold per ton of stuff. The sinking has been suspended, and we have put the coolies to drive east at the bottom of the pit, and have driven 7 feet 6 inches. Lode in the end, 1 foot 6 inches wide, assaying 9 dwts. 19 grains of gold per ton of stuff. Towards the north-east corner of your property we have made a trench 16 feet long, 6 feet deep, 3 feet wide, nothing met with in this.—Madhulli block. No. 11 trial pit has been sunk 18 feet, total depths from surface 38 feet. About 23 feet from surface we met with a pocket of stuff carrying visible gold. The lode in the bottom is 3 feet wide, assaying 3 dwts. 6 grains of gold per ton of stuff.

LADY LOCH.—The manager, under date Coolgardie, April 6, reports as follows:—I have opened out a chamber at the 100 feet level and also put in two drives, east and west. On the west side I have driven 14 feet. The reef is about 3 feet thick and has every appearance of making larger. The east drive is in 8 feet from shaft showing fully 2 feet 6 inches of payable stone and I think the shoot of gold is going in that direction. I am well pleased with this drive and expect good results from it, as at present gold can be seen in the face while breaking the stone down. The condenser is working splendidly and I have now got 1000 gallons of fresh water on hand.

MILLS' DAY DAWN UNITED.—Mine manager's report for fortnight ending March 22: Underlie shaft sunk 6 feet, total depth below 9 level 62 feet. Formation small, with leader of heavy mineral stone. Shaft makes a little more water than formerly. 9th level west driven 14 feet, total length 130 feet. Reef 2 feet 6 inches medium quality. 8th level west, main reef, driven 11 feet, total length 178 feet. Stopes 4 feet, medium quality. 8th level west, H. W. drive, driven 17 feet, total length 36 feet. Reef 1 foot fair quality. 8th level west, crosscut, reef 2 feet medium quality. 7th level west, footwall stope, 2 feet medium quality. 6th level west, main reef, 4 feet, fair quality. Footwall stope between this level and No. 5 2 feet, good quality. 5th level east, footwall crosscut No. 2 have risen 9 feet, total height 17 feet. 5th level west, footwall stope, reef 2 feet heavy mineral stone. 4th level east, No. 4 footwall crosscut, total length 125 feet. I think this crosscut is below footwall reef and that we should rise for it.

MOSMAN.—Mine manager's report for fortnight ending March 30: North Australian Mine. Reef in Byerley level stope 6 to 10 inches, worth (say) 30 dwts. per ton on the north. On the south 8 inches, fairly good quality. In underhand stope really good stone is being got from a reef 4 inches to 6 inches thick. In the intermediate level the reef is 4 inches of very good quality.—Peabody Mine. Shaft deepened 6 feet, total depth 113 feet. Water has decreased and sinking has been resumed.—Wyndham Mine. Underlie shaft sunk 12 feet, total below 13 level 112 feet. Reef 22 inches, 30 dwts. Have sunk through 18 feet of this. The formation is favourable for a gold-bearing reef to live in.—8 level south (Footwall level). Total length 199 feet. Reef 8 inches, fairly good quality.—West drive. Reef 9 inches, good stone.—9 level south. Reef in stope 10 inches, worth (say) 4½ ounces per ton. The reef is getting thicker as the work proceeds upward.

MOUNT LYELL.—The London board have received the following report from the Melbourne board for the week ending March 27: No. 1 crosscut, No. 1 tunnel. The clearing out and retimbering of the old company's tunnel has been completed.—North drive, No. 3 tunnel. The face has been advanced 10 feet, total 107 feet. There is no change to note.—Indicator winze, No. 3 tunnel. The winze has been sunk 3 feet, total 90 feet. The sinking has been somewhat harder this week.—North drive, No. 4 tunnel. The face has been advanced 8 feet, total 114 feet. The country is schist rock.—No. 1 rise, 50 feet level, engine shaft, No. 4 tunnel. The contractors have put up the rise 3 feet, total 31 feet. The rock alongside the pyrites is still very hard.—North drive, 100 feet level, engine shaft, No. 4 tunnel. This drive has been advanced 2 feet, total 100 feet. The face keeps very hard.—South drive, 100 feet level, No. 2 shaft, No. 4 tunnel. The face has been advanced 2 feet, total 17 feet. The pyrites are intensely hard and solid.—No. 5 tunnel. The repairs to this tunnel have been completed, and the water flumed over the soft ground. The contractors have driven the tunnel 3 feet, total 994 feet.—Ore sampled and bagged from the dump, 100 bags, weighing 6 tons 13 cwts. 3 qrs., and containing 2233 ounces silver, and 18 cwts. 0 qr. 5 lbs. of copper.

NEW KLEINFONTEIN.—The directors submit the following summary of operations for March: Mining and milling. Quartz mined, 5620 tons of 2000 lbs.; quartz milled (65 heads, ran 29 days) 5620 tons of 2000 lbs.; yielding smelted gold, 1917 ounces 5 dwts. (average per ton 6·82 dwts.); realised £6950 1s. 4d.—Cost. Mining, hauling, and development, 11s. 5·60d. per ton; crushing, sorting, and tramming, 1s. 1·37d. per ton; milling, 3s. 0·95d. per ton; maintenance, 1s. 2·54d. per ton; charges, 1s. 7·71d. per ton; 5620 tons at 18s. 6·17d. per ton, equals £5202 5s. 11d.—Cyanide treatment. Tailings treated, 4350 tons of 2000 lbs.; yielding smelted gold, 691 ounces 6 dwts. (average per ton, 3·17 dwts.); realised, £1866 10s. 4d. —£8816 11s. 8d.—Cost. 4350 tons at 4s. 0·35d.; equals, £876 6s. 10d.—£6078 12s. 9d.; profit for month, £2737 18s. 11d.—Capital account. Expended on permanent mine, £987 3s. 6d.; machinery and plant, £3865 5s. 6d.; buildings, £221 19s. 11d. = £5074 8s. 11d.—Mine. Total ore reserves on March 31, 64,694 tons.—Development. Number of feet driven and sunk 570, against 507½ in February; number of tons developed 8033, against 5206 in February. The grade of the ore at the various points of development is maintained. The new main incline shaft (eastern section) is down and timbered to 106 feet. The main west incline is now being continued to third level. The acquisition of the dip claims were confirmed by the special meeting of shareholders held on the 27th March. The out crop of the Chimes series of reefs has been discovered in the ground acquired, and the prospects are very encouraging. A prospecting shaft is being put down to test the series. A diamond drill hole will also be put down to locate the reefs at about 300 feet depth.—Remarks. There are about 1200 tons of ore broken in stopes. The new mill steaming station will be completed by the end of April. The equipment at the west incline is completed.

NEW QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers:—No. 2 south level. Stoping has been carried on over this level with no change, the reef being small, varying from 2 to 5 inches; the ground is very hard.—No. 4 south level. Stoping has been carried on on the footwall vein, the reef varying from 3 to 9 inches; portion of this stope is blank and the ground is much harder.—No. 5A south level. Stoping is being continued in this level. The reef is very irregular, from a leader up to 6 inches.—No. 6 south level. Sinking in the footwall has been continued. A formation has been struck at about 20 feet under the level, the formation being about 20 feet under the level, the formation being about 18 inches wide, carrying several thin veins of quartz.—No. 1 A underlie. The northern level has been extended a further distance of 25 feet, making a total distance of 165 feet. Several veins of quartz have been met during the fortnight.—No. 4 formation, No. 2 north level. This level has been advanced a farther distance of 20 feet, making a total distance of 245 feet. The reef in the level has been very small during the fortnight, averaging about 3 inches. Stoping has also been continued over this level, the reef varying from 3 inches to 1 foot.—Underlie shaft. The sinking of the underlie shaft has been resumed and extended a further distance of 10 feet, making total distance from end of crosscut 115 feet. There is no reef at present in the shaft. —Quantity of quartz raised during the fortnight:—No. 2 level south 52 trucks, No. 4 level south 117 trucks, No. 5A level south 65 trucks, No. 4 formation 161 trucks; total, 395 trucks.—(Signed) Henderson.

MOUNT ZEEHAN (Tasmania).—Manager reports for week ended March 29: Argent section, main engine shaft. No. 6 lode. Owing to breakdown of pumping engine, have had to suspend work here, and at No. 1 lode, Queen's extended section, which is worked by a wire-rope arrangement from this shaft. Spare engine and boiler are now being erected at No. 8 lode with all speed.—Tributers. The tributing parties on the different sections, during the past month have been fairly successful, and have sold ore netting to company £167.

OOREGUM. — Superintendent's report for fortnight ending April 23: Taylor's shaft sunk 14 feet, total depth below 660 feet level 118 feet. Lode 5 feet wide, assay value 3 ounces 3 dwts. 3 grains. The surveyor, after levelling for the 760 feet level, finds we have yet to sink 7 feet to correspond with the 760 feet level from Wallroth's; when down the drivages north and south will be commenced. The 660 feet level south is driven 29 feet, total 210 feet. Lode 2 feet wide, assay value 3 ounces 16 dwts. 5 grains. No. 1 winze, 660 feet level south, sunk 2 feet 6 inches, total 17 feet 6 inches. Lode 2 feet 9 inches wide, assay value 1 ounce 12 dwts. 16 grains. The 560 feet level south driven 18 feet, total 466 feet 6 inches. Lode 2 feet 3 inches wide, assay value 1 ounce 13 dwts. 18 grains. No. 2 winze, 560 feet level south, sunk 4 feet 9 inches, total 47 feet 9 inches. Lode 1 foot 3 inches wide, assay value 2 ounces 3 dwts. 12 grains. No. 3 winze, 560 feet level south, sunk 7 feet 6 inches, total 21 feet. Lode 1 foot 3 inches wide, assay value 6 dwts. 12 grains. No. 4 winze, 460 feet level south, sunk 8 feet, total 80 feet 6 inches. Lode 1 foot 6 inches wide, assay value 5 dwts. 10 grains. The level north from back of No. 4 rise, 280 feet level south, driven 7 feet, total 105 feet. Lode 8 inches wide, assay value 1 ounce 3 dwts. 21 grains. Wallroth's shaft sunk 8 feet, total 1025 feet 6 inches. There is a branch of quartz in shaft 9 inches wide, which has come in from the hanging wall, and is now inclining at the same angle as shaft; by assay it gave 7 dwts. 15 grains of gold per ton. We still believe the main part of lode is standing to the west of shaft. The 960 feet level south driven 27 feet 6 inches, total 107 feet 6 inches. Lode 3 feet wide, assay value 5 dwts. 10 grains. No. 1 rise, 960 feet level south, commenced; risen 14 feet 3 inches. Lode 9 inches wide, assay value 6 dwts. 12 grains. The 860 feet level south driven 27 feet 3 inches, total 424 feet 3 inches. Lode 1 foot, assay value 8 dwts. 17 grains. No. 1 winze, 860 feet level south sunk 3 feet 9 inches, total 87 feet 6 inches. Lode 9 inches wide, assay value 9 dwts. 19 grains. No. 2 winze, 860 feet level south sunk 5 feet, total 28 feet 6 inches. Lode 1 foot 2 inches wide, assay value 8 dwts. 21 grains. The 860 feet level north driven 15 feet 9 inches, total 248 feet 3 inches Lode very small, sample from which gave 6 dwts. 12 grains of gold per ton. No. 1 winze, 860 feet level north sunk 7 feet, total 55 feet 3 inches. Lode 1 foot wide, assay value 4 dwts. 8 grains. The 760 feet level south driven 30 feet 9 inches. total 549 feet. Lode 1 foot 4 inches wide, assay value 11 dwts. No. 2 winze, 760 feet level south sunk 4 feet 3 inches, total 33 feet 6 inches. Lode 6 inches wide, assay value 3 dwts. 6 grains. The 760 feet level north driven 12 feet 6 inches, total 312 feet 6 inches. Lode very small. No sample. No. 2 winze, 760 feet level north sunk 5 feet 9 inches, total 26 feet 6 inches. Lode 6 inches wide, assay value 6 dwts. 12 grains. No. 4 winze, 660 feet level south sunk 1 foot 6 inches, total 71 feet 3 inches. Lode 6 inches wide, assay value 8 dwts. 17 grains. No. 5 winze, 660 feet level south sunk 3 feet 6 inches, total 99 feet 6 inches. Lode 1 foot 3 inches wide, assay value 4 dwts. 8 grains. No. 7 winze, 660 feet level south commenced sunk 4 feet 3 inches. Lode 2 feet 6 inches wide, assay value 2 ounces 1 dwt. 9 grains. Incline winze, 360 feet level south commenced on quartz discovered in footwall, sunk 17 feet. Lode 4 feet wide, assay value 1 ounce 17 grains. The 360 feet level north driven 15 feet 6 inches, total 408 feet 3 inches. Lode small. No sample. The 280 feet level north driving north on fold driven 15 feet, total 201 feet 6 inches. Lode 1 foot wide, assay value 7 dwts. 15 grains. No. 5 winze, 215 feet level north sunk 6 feet 3 inches, total 25 feet 3 inches. Lode 8 inches wide, assay value 10 dwts. 21 grains.—Low's shaft sunk 5 feet 9 inches, total 707 feet 4 inches. The 610 feet level south driven 15 feet, total 222 feet 6 inches. Lode 6 inches wide, assay value 3 ounces 5 dwt. to 8 grains. The 610 feet level south driving north on lode from point of intersection driven 16 feet, total 43 feet 9 inches. Lode 1 foot wide, assay value 14 dwts. 8 grains. No. 1 winze 610 feet level south commenced sunk 6 feet. Lode 2 feet wide, assay value 12 dwts. Probyn's shaft sunk 6 feet 6 inches, total 1081 feet. The 1050 feet level south driven 11 feet, total 32 feet. Lode 3 inches wide, assay value 13 dwts. 2 grains. No. 1 winze 1050 feet level north sunk 3 feet 6 inches, total 26 feet. Lode 1 foot wide, assay value 1 ounce 1 dwt. 19 grains. No. 1 winze 950 feet level south sunk 3 feet 3 inches, total 76 feet. Lode 8 inches wide, assay value 17 dwts. 10 grains.—Exploratory work, Wallroth's shaft. The level south from crosscut east 280 feet level south driven 9 feet, total 56 feet. No lode; suspended.—Munday's lode explorations. The 280 feet level north driven 13 feet 6 inches, total 43 feet. Composition of lode unchanged, except that it contains a little more quartz, a sample from which gave by assay 5 dwts. 10 grains of gold per ton.—Probyn's shaft. The level north from crosscut east 450 feet level south driven 9 feet 6 inches, total 47 feet 6 inches. Lode irregular and small. A sample was taken which gave by assay 17 grains of gold per ton. Throughout the mine 54 stopes are being worked, which are yielding quartz of the average quality. At the end of month all of these will be measured and reported in the usual way.

OTTOS KOPJE DIAMOND.—Mr William Evans, a director of the above company who is in Kimberley on a visit of inspection, cabled on the 11th inst. as follows:—I am satisfied with the prospects of the mine and have every confidence in the management, Machinery not working yet. I have witnessed trials of ground from the new area declared payable by Mr. Lisle. Average 7½ carats per 100 loads.

The RIO TINTO COMPANY notifies that at the twenty-second half-yearly drawing of its five per cent. bonds, 1894, and at the fifth half-yearly drawing of the 1892 issue, to be held on the 31st inst., bonds amounting to £12,515 and £7040 respectively will be drawn, to be paid off at par on July 1.

THE TIN DEPOSITS OF DURANGO, MEXICO.

By WALTER RENTON INGALLS.

(*Concluded from page 547.*)

DANA is of the opinion that the oxides of zinc and arsenic in these ores are to be considered as merely impurities, and not as constituting distinct mineral species.

The third important scene of tin mining in Durango is the Cerro de Iglesia de los Remedios, less than a half mile west of the centre of the City of Durango, and within sight of the famous Iron Mountain. At this point a shaft was sunk some 60 feet to open a vein of cassiterite, and longitudinal openings were made in the customary Mexican fashion; but the vein proved to be small, and the mine was soon abandoned. The country-rock is rhyolite-tuff, and the vein-formation is identical with that of Potrillos; hence, an extended description is unnecessary.

With respect to other deposits of tin in Mexico there is not much reliable information. Attempts have been made within the past few years to work those at Sain Alto, and certain other in Guanajuato, but with what success has not been reported so far as I know. The mines in the Canton of Teocaltiche, in the State of Jalisco, were formerly exploited somewhat extensively. According to a report to the *Sociedad Mexicana de Mineria*, by the Superior Gobierno del Estado, July 5, 1883, the mine Los Vallecitos, in that district, had been opened to a depth of 30 metres, and for a length of 200 metres on the vein. Its product, when at its best, was about 9000 lbs. of black tin per month, from which about 6000 lbs. of metal were obtained. The mines at Bolaños, also in Jalisco, are still worked in a desultory manner to supply local requirements.

Before concluding this paper, mention should be made of a brief description of the Mexican tin deposits published 25 years ago. It occurs in a footnote to Baron von Richthofen's paper, "Ueber das Alter der goldführenden Gänge und der von ihnen durchsetzten Gesteine." In speaking of the denudation of veins the author says:

> The existence of tin in the State of Durango has been known for a long time. The Indians have been wont to gather the ore and to use the metal smelted from is for barter in the place of money. Mr. W. Ashburner made a very careful examination of the deposits, which are widespread, and declared that for various reasons they are unworkable. The tin ore is found in a hilly part of the high plateau, poor in timber and water, which consists almost entirely of trachyte. The most comes from secondary deposits of alluvial gravel in ravines and hollows. It occurs in small kernels and nuggets like the Bohemian wood-tin. It is also found, however, in original deposits in fissures (*Spalten*) in the trachyte, in part as incrustations of the walls and in part in rounded lumps of various size, which, together with small, very perfect crystals of topaz and fragments of trachyte, are imbedded in a clayey mass which fills the fissure. In the vicinity of the ore bodies the trachyte is very much decomposed. According to hand specimens which Mr. Ashburner brought with him, it is of an ash-grey colour, porous and full of small spherulites; it contains black mica, and, very sparingly, small crystals of feldspar, which could not be more exactly determined on account of the advanced decomposition of the rock. Another variety has an amygdaloidal structure and contains in irregular-formed cavities a white, spongy substance, such as is very often found in trachytes and rhyolites when they are decomposed by solfataric action. I saw several pieces of the first variety, which still showed a crust of tinstone. Mr. Ashburner had broken them from the walls of the fissure. These crusts had the peculiar kidney-shaped, smooth surface of botryoidal hematite. It consists of concentric, radially fibrous layers. Any one who has seen it will recognise the unquestionable origin of the stream tin. Since not merely one but many veins of the character described were examined, and the trachyte in the neighbourhood of all of them was strongly decomposed, the recent origin of this tin ore may be accepted as a fact, and its origin is scarcely to be sought in anything but solfataric action.

The igneous rocks of Mexico have been but imperfectly studied, and the following description of them by Professor Don Mariano Bárcena is worth quotation:

> Igneous granite occurs in many parts of Mexico frequently under circumstances analogous to those of the porphyries and trachytes, with which rocks it is related. This granite contains black mica, while many of the porphyries and trachytes also contain mica, together with quartz, and form insensible gradations from the igneous granite.
>
> The volcanic porphyries show crystals, generally light-coloured disseminated in a feldspathic paste. Sometimes they show a columnar structure like basalts. In colour they are usually white greyish, or reddish, but sometimes pass into the dark colours of basalt. In hardness they vary from five to six, and in density from two to three.
>
> These volcanic porphyries of Mexico often present characteristics indicative of hydrothermal origin, or at least indicating that when they appeared they were plastic because of the water that impregnated them, since there are to be observed in them many undulating lines of hydrosilica and other substances which seem to mark the direction of fluidal currents. Thus there are to be noted in these porphyries concretions of opal, hyalite, and also oxides of iron and tin, which are, without doubt, of hydrothermal origin.
>
> The trachytes of Mexico began to appear in the cretaceous age and there were large outflows in the Tertiary, and the same occur even in the recent period. They are exceedingly common and are related to the porphyries previously described. The lavas of the last eruptions of the volcanoes Ceborruco and Colima are pitch-stone trachytes.

BRITISH GUIANA'S GOLD INDUSTRY.—The gold entered at the Custom House, Georgetown, on the 18th ult. for shipment per the R.M.S. *Solent* amounted to 6319 ounces 18 dwts. 13 grains to the value of $111,131·65 as compared with the previous shipment of 4055 ounces 2 dwts. 4 grains to the value of $72,164·47. With this addition the total output for the year amounts to 31,478 ounces 7 dwts. 23 grains to the value of $555,008·69. The following are the returns of gold entered at the Department of Mines for the weeks ending:—

	April 13. Ozs. dwts. grs.			April 20. Ozs. dwts. grs.			April 27. Ozs. dwts. grs.		
Barama	80	4	0	136	19	19	9	15	8
Barima	763	19	5	110	5	23	859	18	3
Cuyuni	1,033	13	5	96	10	12	183	12	12
Demerara	—			2	6	0	—		
Essequebo	814	17	19	110	6	7	625	15	16
Groete Creek	7	5	18	—			—		
Mazaruni	141	11	16	—			89	5	2
Potaro	835	4	17	354	9	13	286	0	12
Puruni	31	10	4	686	11	4	12	12	4
Totals	3,708	6	2	1,497	9	6	2,066	19	19

Total returns for April (up to 27th) 10,563 ounces 14 dwts. 6 grains. The gold exported from January 1 to April 29, 1895, amounted to 31,378 ounces 7 dwts. 23 grains at $555,008·69, as against 27,923 ounces 15 dwts. at $498,337·18 for the corresponding period last year.

THE MOUNT LYELL MINING AND RAILWAY COMPANY (LIMITED) announce that the London share certificates are now ready for delivery in exchange for receipts.

SAN SEBASTIAN NITRATE.—The sixth annual general meeting of the San Sebastian Nitrate Company (Limited) was held on Monday, at Winchester House.—Mr. Alexander R. Robertson presided, and in moving the adoption of the report and accounts, said the result of the year's working had, on the whole, been satisfactory, although had prices ruled as high as last year, it would have been better. Under the head of profit and loss account there was a balance at December 31, 1893, of £10,289, less dividends that were paid in February and May last year, £5750, leaving £4539. The profit for the year ended December 31 last was £12,773, and the profit on exchange £144, so that they had a profit of £12,918. On the other side of the account the property stood at £132,495, being somewhat less than in the previous year. This was owing to their having sold one of the oficinas, Tegethoff, which had been worked for some time with unsatisfactory results. The stocks of iodine and nitrate were placed at £12,876, against £12,836 in the previous year. With regard to the future of the nitrate trade, the failure to preserve the combination amongst the nitrate companies had tended much to decrease prices, and it was now very difficult for the smaller companies to make profits as large as heretofore.—Mr. G. M. Inglis seconded the motion for the motion of the report and accounts, which was carried unanimously.—The retiring director, Mr. George Bush, having been re-elected, the proceedings terminated in the usual manner.

The directors of the COPIAPO MINING COMPANY (LIMITED) have declared an interim dividend of 1s. 6d. per share free of income-tax, being at the rate of 7½ per cent. per annum payable on and after June 5 next.

The ROODEPOORT DEEP LEVEL MINING COMPANY (LIMITED) notify that as the result of urgent representatiens, the makers of the 40 stamp battery advise that they hope to make complete shipment before the end of the current month, thus enabling crushing to commence some two months earlier than was expected.

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The Hague, May 8th, 1895.

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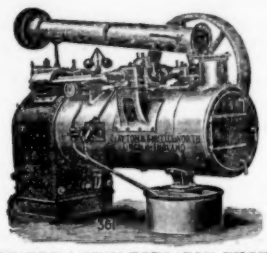

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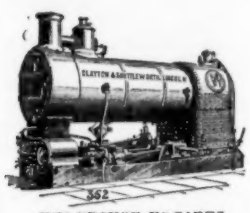

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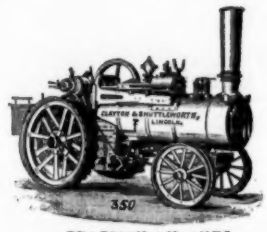

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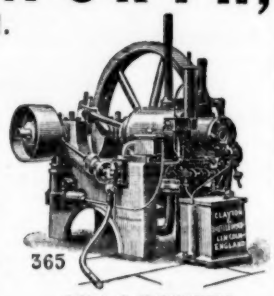

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Report by John L. M. Fraser, C.M.E.

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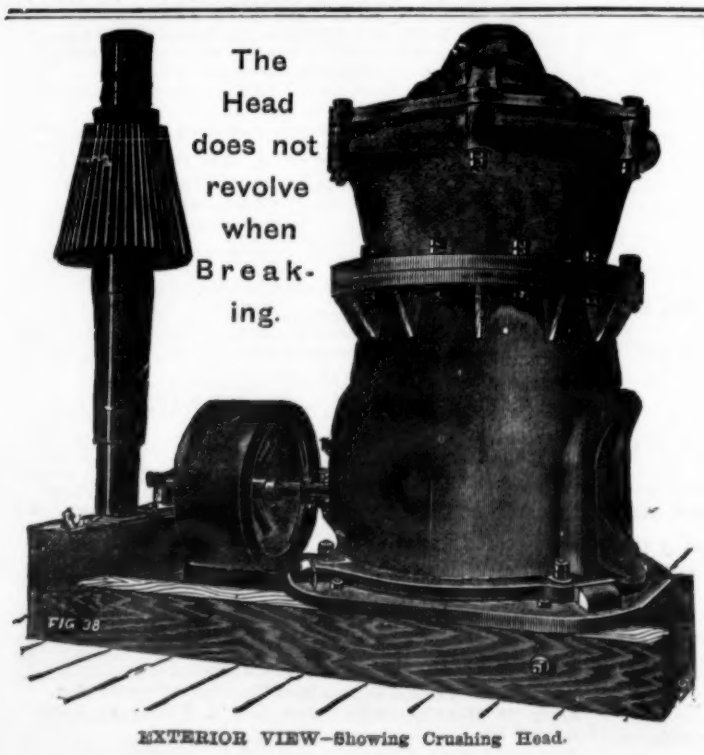
The lodes bear east and west, cutting the formation obliquely, and dipping about 1 in 6 south. The mines consist of five claims on the "main lode" for a distance of 4000 feet, and have been well proved by several shafts sunk down to the 9th level, from which 88,100 tons of ore have been sold at a profit of $1,529,293. The reserves of ore above the 9th level are 173,100 tons of shipping ore, the stopes producing 35,000 tons per year, at a profit of $399,350. The shafts are sinking below the 9th level, and crosscuts will be put out south to intersect the lode at the 10th level. The width of the lode varies from 10 feet to 20 feet, of which from 5 feet to 10 feet is solid ore, and the remainder good concentrating ore. The mines are well equipped with pumping, winding, and concentrating plants, at a cost of over $500,000. The workings are lighted by electricity, and the machinery is driven by water, electrical, and steam power.

The water-rights above the mines have been located by the mineowners, and cannot be used by any other mine. The mines are well served by the Northern Pacific and Union Pacific Railways with sidings into the mines, so that transit is easy and inexpensive. By the amalgamation of these claims a great saving will be effected in the surface and underground management, also in the concentrating mills, and by using the combined water-powers, equal to about $50,000 per year.

The lode being a true fissure cutting through the formation obliquely one has only to keep the ore ground well opened in advance of the stoping and the present profits of $399,350 can be continued for many years to come. A company is being privately formed to purchase this group of mines for £353,000, mostly in shares, with a further £20,000 in reserve, the present profits being equal to over 21 per cent. on the nominal capital of £370,000.

CAPE ASBESTOS COMPANY (LIMITED).—The second ordinary general meeting of the Cape Asbestos Company (Limited) was held on Wednesday, at Winchester House, Old Broad street, E.C.—Mr. L. Breitmeyer presided, and, in moving the adoption of the report, said that the profit and loss account of the year's operations closed with a small credit balance. It was a matter of regret to the shareholders that they were unable to pay a dividend; but they had to bear in mind that the heavy incidental expenses connected with the formation of the company had, to a great extent, swallowed up their profits. They had had to contend against many difficulties during the year which were incidental to the introduction of a new article like blue asbestos. He was glad to state those difficulties had been gradually overcome, and the asbestos was now making steady progress. In fact, their blue asbestos had been acknowledged by the trade to be superior to the Canadian and Italian asbestos. He, therefore, was confident that when they met next year they would be able to place before them a much better balance-sheet. In order to develop the business of the company, it was necessary that more capital should be raised, and at the close of the meeting a resolution would be proposed for that purpose.—Mr. Francis Oats, in seconding the motion, congratulated the shareholders on the fact that the demand for the article which they sold was increasing, and that it was likely to command a wide market in the future.—The motion for the adoption of the report and accounts was then put, and carried unanimously.—Subsequently an extraordinary general meeting was held, at which resolutions were passed increasing the capital to £100,000, by the creation of 45,000 new shares of £1 each, and also approving a provisional agreement entered into by the company with Messrs. Wernher, Beit, and Co., providing for the guarantee of an issue of part of such new capital.

THE FEDERATED INSTITUTION OF MINING ENGINEERS.—General meetings of the members of the Federated Institution of Mining Engineers will be held on Thursday, May 30, at 12 noon, and on Friday, May 31, at 10 a.m., in the Rooms of the Society of Arts, John street, Adelphi. On the first day the following papers will be read or taken as read:—"Presidential Address," by Mr. W. N. Atkinson; "Notes on Bauxite in County Antrim, &c., and its Uses," by Mr. George G. Blackwell; "Sampling," by Mr. T. Clarkson; "Blasting Explosives," by Professor Vivian B. Lewes; "The Gold-milling Process at Pestarena," by Mr. A. G. Charleton. The papers to be read or taken as read on Friday are:—"Remarks on the Banket Formation of Johannesburg, Transvaal," by Mr. A. R. Sawyer; "The Composition of the Extinctive Atmospheres Produced by Various Flames and by Respiration," by Professor Frank Clowes; "The Composition of the Limiting Explosive Mixtures of Various Gases with Air," by Professor Frank Clowes; "The Mineral Oils of Lower Elsass," by Dr. L. van Werveke; "Copper Mining in India," by Mr. Robert Oates; "The Recent Magnetic Survey of the United Kingdom,' by Professor A. W. Rücker; "The MacArthur-Forrest Process, by Mr. John McConnell,



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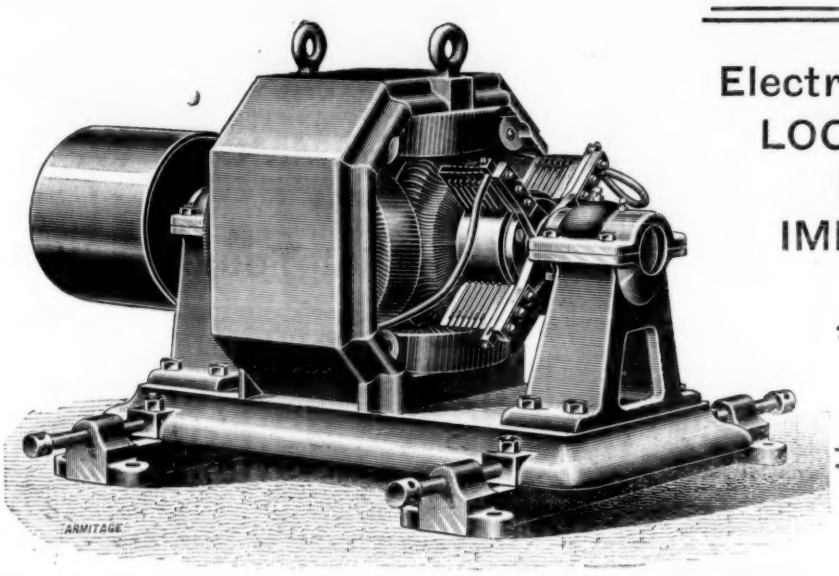

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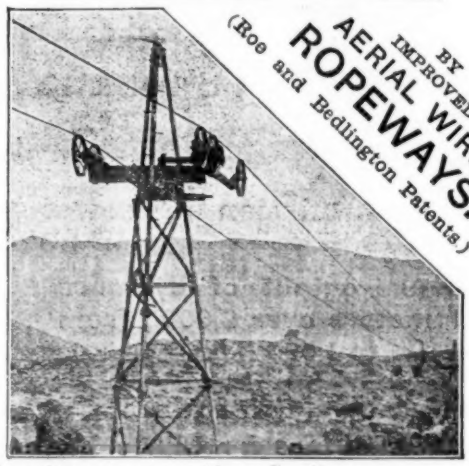

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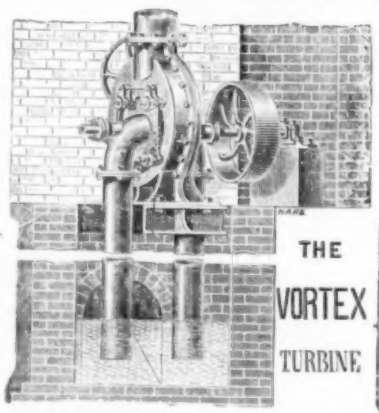

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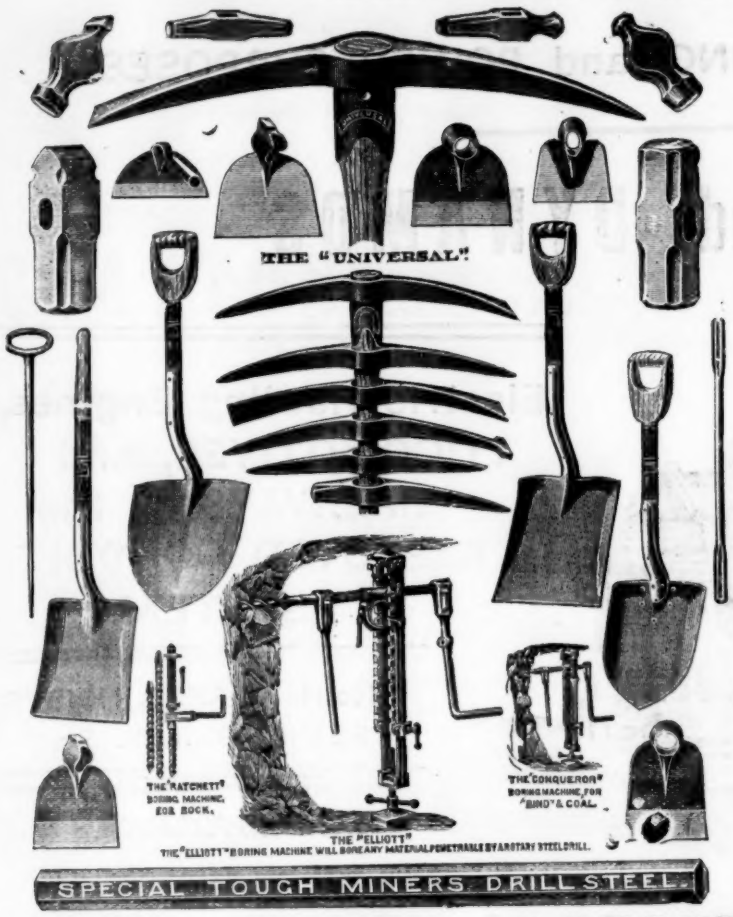
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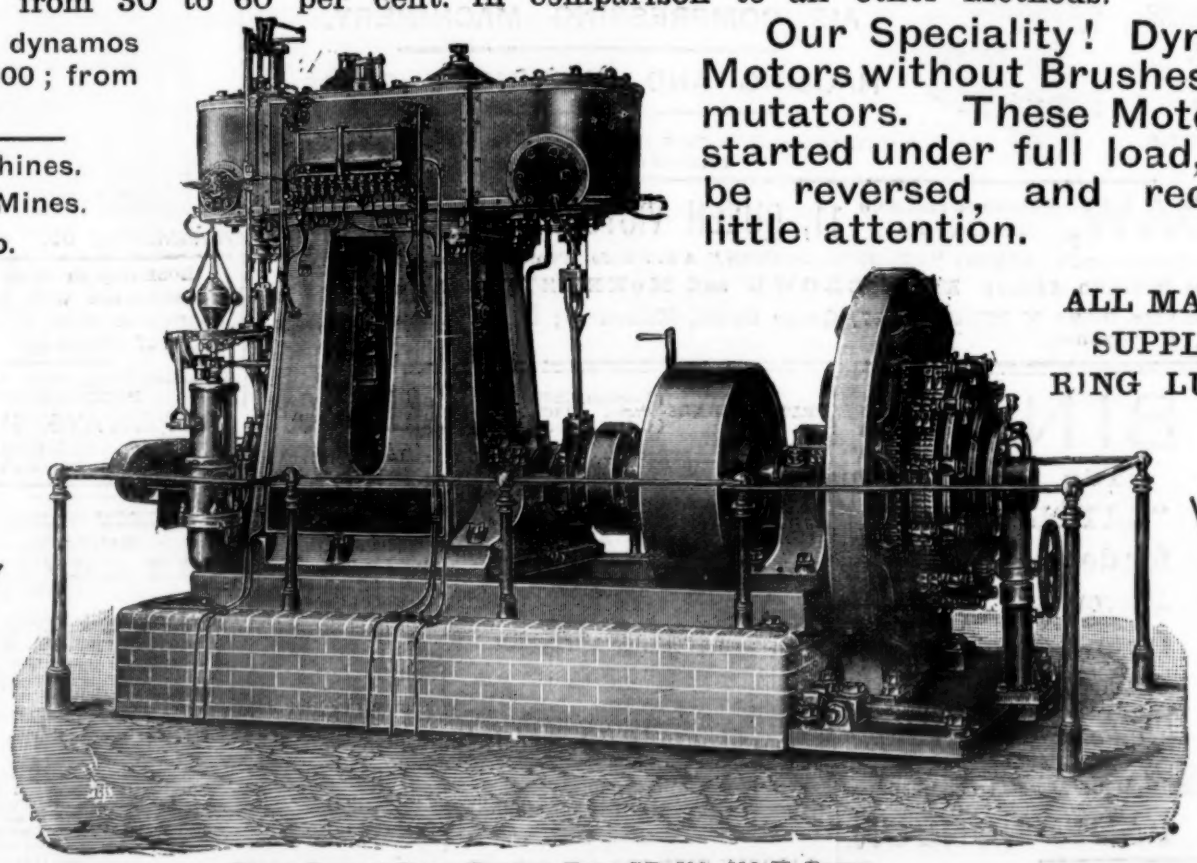

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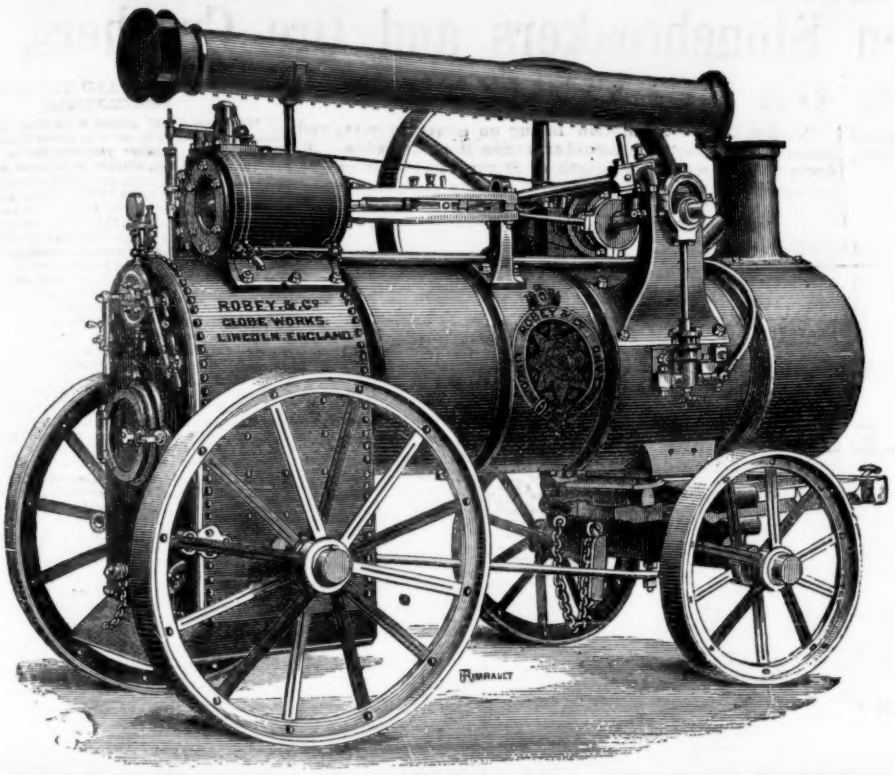

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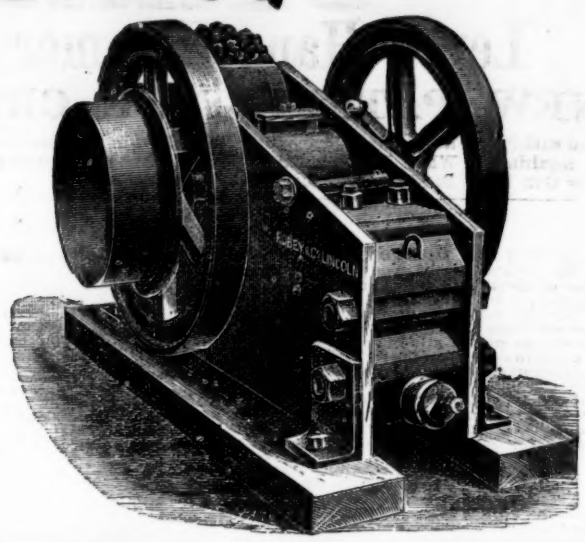

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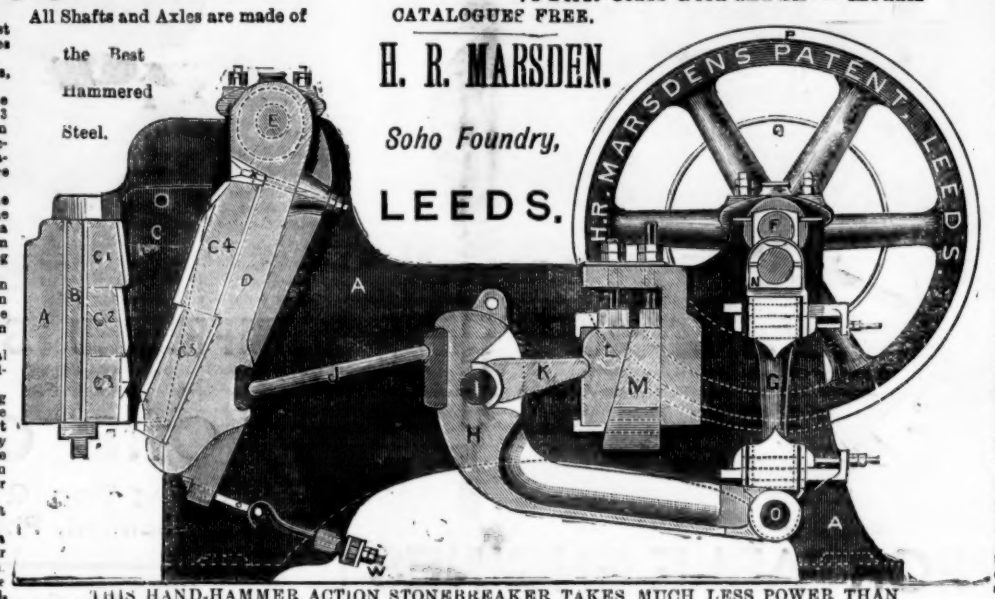

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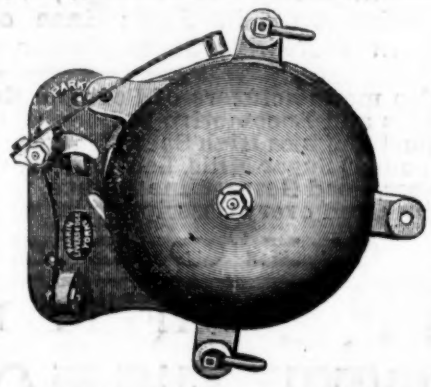

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